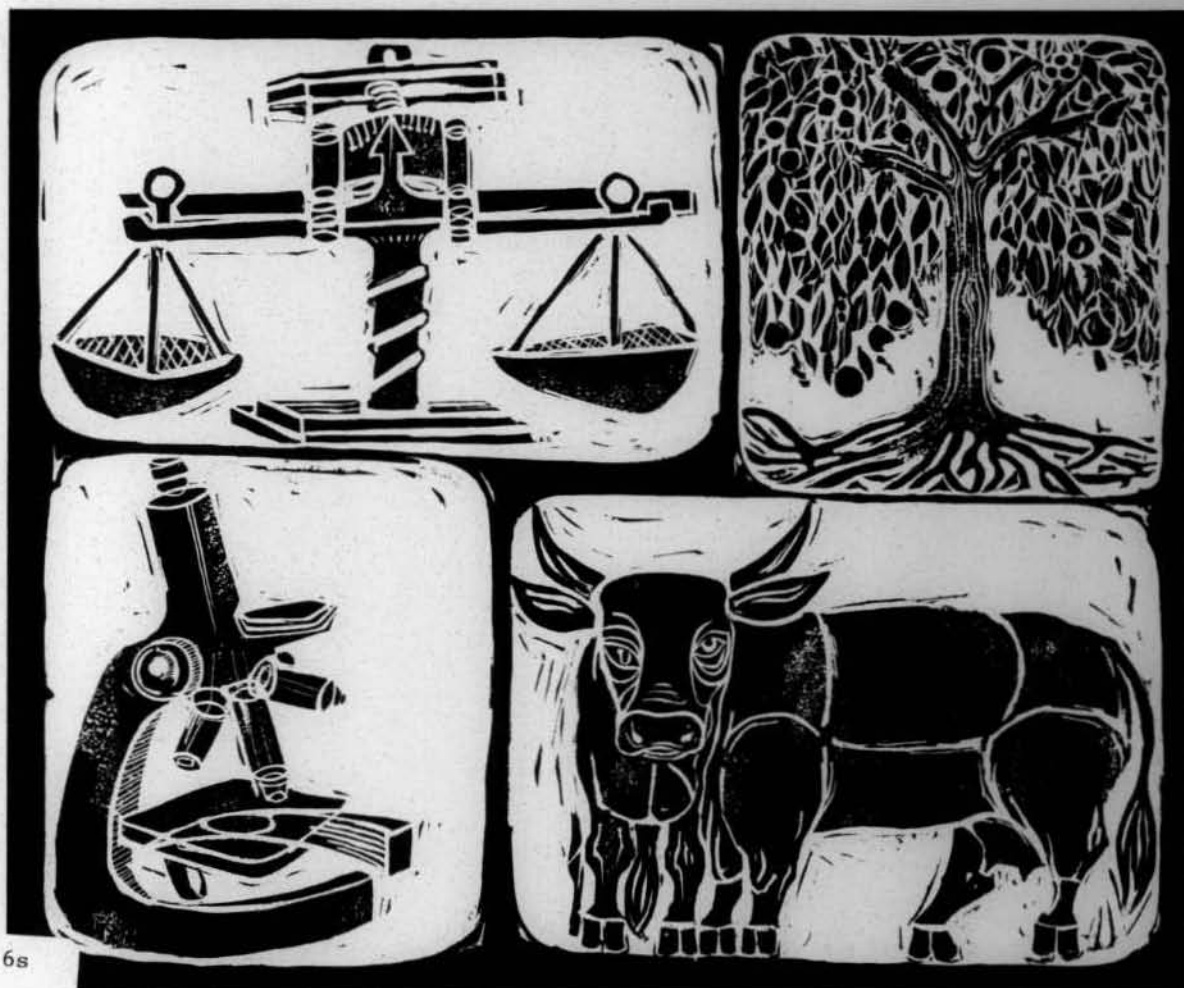


39th

Biennial Report

FLORIDA DEPARTMENT OF AGRICULTURE
July 1, 1964 to June 30, 1966



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39th Biennial Report

**FLORIDA DEPARTMENT
OF AGRICULTURE**

*July 1, 1964 to
June 30, 1966*

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DOYLE CONNER
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF AGRICULTURE

THE CAPITOL
TALLAHASSEE
32304



The Honorable Haydon Burns
Governor of Florida

Dear Governor:

I have the privilege of submitting to you the 39th Biennial Report of the Florida Department of Agriculture for the period of July 1, 1964, to June 30, 1966.

This report emphasizes the major services and programs provided by this Department with statistical data indicating their scope and volume.

Respectfully submitted,

Doyle Conner
Commissioner

Florida Department of Agriculture

DOYLE CONNER
Commissioner

HAROLD H. HOFFMAN
Assistant Commissioner

Division Directors

HAROLD H. HOFFMAN
Division of Administration

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Division of Animal Industry

DR. V. E. STEWART
Division of Chemistry

ALEX G. SHAW
Division of Dairy Industry

H. M. RILEY
*Division of Fruit and
Vegetable Inspection*

LOWELL WOODHAM
Division of Inspection

JOHN D. STILES
Division of Marketing

H. L. JONES
Division of Plant Industry

NALLS BERRYMAN
Division of Standards



Advisory Council Members

VERNON L. CONNER, *Chairman*

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Okeechobee, Florida

SWINE INDUSTRY

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Lee, Florida

DAIRY INDUSTRY

Robert W. Hall
Lake Placid, Florida

POULTRY INDUSTRY

Herman O. Jones, Jr.
Jacksonville, Florida

APIARY INDUSTRY

Felix H. Uzzell
Sebring, Florida

CITRUS INDUSTRY

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Mount Dora, Florida

TROPICAL FRUIT INDUSTRY

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SEED INDUSTRY

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Monticello, Florida

COMMERCIAL FEED INDUSTRY

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Jacksonville, Florida

FIELD CROPS INDUSTRY

Forrest Davis
Quincy, Florida

FORESTRY INDUSTRY

Foster Shi Smith
Starke, Florida

COMMERCIAL FERTILIZER & PESTICIDE INDUSTRY

Lee F. Branan
Ocala, Florida

RETAIL FOOD INDUSTRY

Ted Moorhead
Miami, Florida

INDEPENDENT AGRICULTURAL MARKETS

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Monticello, Florida

MEAT PROCESSING & PACKING INDUSTRY

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Center Hill, Florida

FOOD CANNING INDUSTRY

W. Allen Markham
Okeechobee, Florida

PETROLEUM INDUSTRY

T. H. McMillan
Jacksonville, Florida

SUGAR INDUSTRY

Harry T. Vaughn
Clewiston, Florida

AGRICULTURAL LIMESTONE INDUSTRY

Fred Montsdeoca
Ocala, Florida

HORSE INDUSTRY

Joe O'Farrell
Ocala, Florida

CITIZEN-AT-LARGE

Colin English, Sr.
Tallahassee, Florida

EX-OFFICIO MEMBER

Dr. Marshall O. Watkins
Director, Agricultural

Extension Service

EX-OFFICIO MEMBER

Dr. Joseph R. Beckenbach
Director, Agricultural
Experiment Stations

EX-OFFICIO MEMBER

Dr. E. T. York
Provost for Agriculture
University of Florida

Technical Committees

Animal Industry Technical Committee

Gerald Cayson, Chairman
Blountstown

Robert L. Griffin
Ft. Pierce

L. A. Almand
Lee

Herman O. Jones, Jr.
Jacksonville

J. O. Pearce, Sr.
Okeechobee

A. Fred McDavid
Brooker

Robert W. Hall
Lake Placid

Joe O'Farrell
Ocala

Dairy Industry Technical Committee

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Jacksonville

James Watson
Jacksonville

Dr. James B. Nichols
Jacksonville

Dr. James Acree
Jacksonville

John M. Hood
Bradenton

Dr. Everett L. Fouts
Gainesville

Alex G. Shaw
Tallahassee

C. C. Sellers
Tallahassee

Fertilizer Industry Technical Committee

Dr. Joseph R. Beckenbach, Chairman
Gainesville

Dr. Marshall O. Watkins
Gainesville

Dr. V. E. Stewart
Tallahassee

Vincent Giglio
Tallahassee

Forrest Davis, Chairman
Quincy

Fertilizer Industry Technical Committee (Cont'd)

J. O. Pearce, Sr.
Okeechobee

Lee F. Branan
Ocala

Roy Vandegrift, Jr.
Canal Point

Vernon Conner
Mount Dora

Pesticide Industry Technical Committee

Dr. Joseph R. Beckenbach, Chairman
Gainesville

Dr. Marshall O. Watkins
Gainesville

Vernon Conner
Mount Dora

Dr. V. E. Stewart
Tallahassee

Vincent Giglio
Tallahassee

Ray H. Cooney
Tampa

Roy Vandegrift, Jr.
Canal Point

Forrest Davis
Quincy

Plant Industry Technical Committee

Vernon Conner, Chairman
Mount Dora

N. Curtis Peterson, Jr.
Lakeland

Foster Shi Smith
Starke

Felix H. Uzzell
Sebring

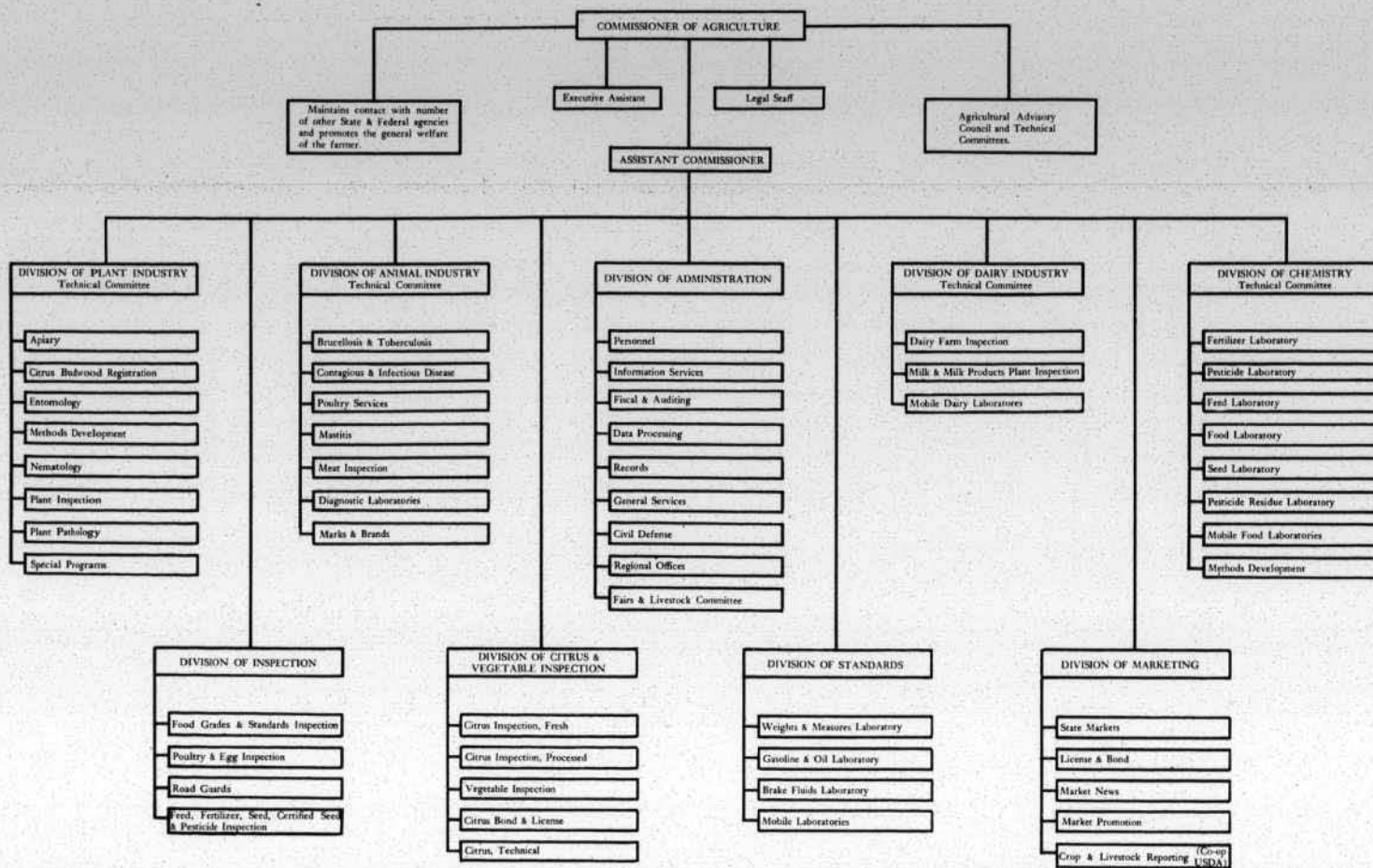
Roy Vandegrift, Jr.
Canal Point

Stuart Simpson
Monticello

Colin English, Sr.
Tallahassee

W. R. "Bill" McMullen
Tampa

ORGANIZATIONAL CHART



Introduction

The Florida Department of Agriculture is responsible for promoting the general welfare of Florida agriculture as well as enforcing regulatory laws to protect agriculture and the consuming public.

The Commissioner of Agriculture is charged with leadership and supervision in the field of agriculture, administration of regulatory laws established for the health and welfare of consumers and farmers, and leadership in State affairs as a member of the State Cabinet and various other boards and commissions.

Department Divisions

There are nine divisions in the Department of Agriculture. Each is charged with specific powers, duties and responsibilities. They carry out the work of the Department under the direction of the Commissioner. These divisions include Administration, Inspection, Animal Industry, Chemistry, Dairy Industry, Fruit and Vegetable Inspection, Marketing, Plant Industry and Standards.

Technical Committees and Advisory Council

The Divisions of Animal Industry, Chemistry, Dairy Industry and Plant Industry have technical committees—appointed by the Commissioner from the respective industries—to advise and keep them up-to-date on industry problems and trends. There is also a 27-man Agricultural Advisory Council which advises the Commissioner on agricultural matters.

Division of Administration

It is the function of the Division of Administration to coordinate overall programs within the Department of Agriculture and to handle its internal affairs.

This is done by members of the Commissioner of Agriculture's personal staff and the various sections established within the Division.

Personnel Section

The Personnel Section handles personnel records of all the Department's employees, and administers rules and regulations pertaining to personnel and personnel practices.

During the biennium, the Section compiled a *Personnel Handbook* for employees. It also continued to improve and modernize its services.

Information Services Section

The "voice" of the Department is the Information Services Section.

Through feature stories, speeches, news releases, photographs, correspondence and personal contacts, this Section has continued to acquaint the agricultural industry and the non-farming public with the advances being made in agriculture and consumer protection.

It also has coordinated the informational services provided by other Divisions with the Department.

The Section initiated and developed the award-winning Festival of Florida Foods project in conjunction with the Florida Industries Exposition. The Festival—the first of its kind in the country—acquainted food buyers and the general public with all foods grown, processed or manufactured in Florida; and provided an opportunity for producer-buyer contacts.

Because of the overwhelming success of this promotion, the Department has adopted the Food Festival as an annual project.

The Information Services Section also coordi-

nated the publicity phases of the Spring Harvest Festivals held in New York City and Chicago. This project is part of a program carried on by the Division of Marketing to promote Florida commodities in northern market areas.

In addition, the Section published six new informational booklets. They included the Florida Department of Agriculture's *Personnel Handbook*, the 38th *Department Biennial Report*, *Vegetable Gardening in Florida*, *Handbook for Florida Animal Disease Diagnostic Laboratories*, *Florida Sugarcane Industry* and *Thoroughbreds in Florida*.

Sixteen other publications were revised and reprinted during this two-year period, and work was initiated on three more new publications and the revision of four others.

Fiscal and Auditing Section

The Fiscal & Auditing Section of the Division continued to modernize its accounting procedures for the Department. The revenue from all sources was monitored, and disbursements were vouchered and approved for payment by the Section. (See Table 1).

Data Processing Section

Through the use of modern equipment, this Section provides timely, accurate and effective data and reports to aid all offices of the Department in the planning, conducting and controlling of their particular duties and functions.

The Section takes all steps necessary in the preparation of machine accounting transactions, statistics and other essential data used by management in decision-making. It also transforms raw data into statistical records and reports, payrolls and tabulations for various other purposes.

During the biennium, the Section initiated and developed 17 new programs of data processing, including reports, files, registration lists and inventory controls.

Records Section

A central record-keeping systems services for the entire Department is provided by the Records Section. During the biennium all non-current records were placed on micro-film to provide a modern, compact and ready source of information.

General Services Section

The activities of the General Services Section have been greatly expanded during the biennium. It now handles mailing services within the Department, purchasing, supply and duplicating services, and telephone services.

The Section also provides other services which cannot be efficiently and economically conducted by any other section.

Civil Defense Section

Of vital importance to all Florida citizens, especially those in large urban centers, are the food supplies that will be available in the event of a disaster.

Civil Defense plans place responsibility for the control of all food, petroleum and liquid petroleum gas supplies at the retail level in Florida with the Department of Agriculture.

All planning for this purpose is being coordinated with the work of other State agencies and



Printing of publications is one of the major functions of the Information Services Section.

the U. S. Department of Agriculture, and records of supplies are kept current by this Section.

In addition, the Civil Defense Section provided specialized training during the biennium for 340 employees in chemical, biological and radiological defense methods.

Agricultural and Livestock Fairs Committee

The Committee approved and issued permits to a total of 88 fairs and livestock shows during the biennium.

During the same period, the Doyle Conner Awards Revolving Fund paid out a total of \$84,986 in awards money (prizes, ribbons, scholarships, etc.) to various 4-H, FFA and other youth activities.

Matching funds for the construction of livestock and fair buildings were unavailable during the biennium, because of the lack of appropriations.

Regional Offices

The Division of Administration maintained two regional offices during the biennium. One is located in Miami and the other in Tampa.

Each regional office is manned by a manager and one secretary, who provide liaison between the large metropolitan areas they serve and the main office in Tallahassee.



Administration Division personnel coordinate and direct the internal affairs of the Department.

Division of Animal Industry

The Division of Animal Industry is the official livestock and poultry disease control agency of the State. It administers the statutes and regulations of the Department pertaining to meat inspection and livestock diseases, including diseases of poultry and turkeys.

The major functions of the Division relate to the protection of the health of livestock and poultry within the State through the establishment of disease control and eradication programs, and the protection of the consuming public through enforcement of meat inspection, labeling and certification laws and regulations.

The Division cooperates with the United States Department of Agriculture in the conduct of those disease programs wherein control and eradication efforts are national in scope. In Florida joint state-federal programs are in progress in tuberculosis, brucellosis, hog cholera, equine piroplasmiasis, and pullorum-fowl typhoid.

Brucellosis and Tuberculosis Section

One additional county—Manatee—was added to the list of modified certified brucellosis areas in Florida during this biennium. Twenty-one counties requalified as modified certified areas.

New impetus was given to the area testing program by a recommendation of the United States Livestock Sanitary Association that movements of cattle from non-certified areas be restricted after January 1, 1968. Nine counties have petitioned the Department for inauguration of this program and work is presently in progress in eight of these counties. Local cattlemen's association brucellosis committees are seeking active participation by their cattlemen in this national program in order to protect out-of-state markets for their cattle.

In order to facilitate the testing procedures, expedite test results, and cut down on the handling of cattle, mobile brucellosis laboratories have been established in areas undergoing testing. Test results can usually be obtained on the same day of bleeding and reactors can be tagged and branded without holding cattle up for an extended

period of time. Under the old system where samples were sent to a central laboratory, it was necessary to hold cattle off pasture and feed them in dry lot for the period of time it took to get test results back, or round them up a second time to pull out infected animals.

A new test which shows great promise, particularly in range herd conditions, is the card test. The primary advantage of this test is its speed. Results can be obtained in a few minutes. Since the blood sample for the card test can be taken from a tail vein, it is not necessary to have a squeeze chute. Any working chute will do. Another advantage of this card test is that it eliminates the "suspicious" category. Animals are either positive or negative to brucellosis. Use of this card test is restricted to regulatory personnel.

All Florida counties are designated as modified accredited tuberculosis areas. This status is maintained by testing every six years all dairy and purebred cattle in the county and by inspection of carcasses at slaughtering establishments of at least 30% of the cattle population during the six year period. Any herd in which infection is found is quarantined and tested at 60 to 90 day intervals until no further infection is found.

Fourteen dairy herds and two beef herds were found to be infected with tuberculosis during the period of this report. These herds were located in 11 counties (See Table 2).

Contagious and Infectious Diseases Section

Inspection of livestock on farms and those passing through livestock markets, the investigation of diseases affecting the swine population, and the supervision of all garbage feeding establishments are the duties and responsibilities of the men of this Section.

The joint state-federal hog cholera eradication program which was instituted in Florida on February 1, 1963, has resulted in almost complete eradication of cholera from the State. During the last two years only two cases of cholera have

been diagnosed of some 35 suspicious cases investigated.

These 35 suspicious cases involved 22 counties. The number of swine vaccinated against hog cholera has continued at a high level, which has assisted in this eradication effort tremendously. The State of Florida has now progressed to Phase III in the 4-phase national hog cholera eradication program. With the success of the program thus far, it is anticipated that in the near future the State will move into Phase IV, and possible be declared a Free State (See Tables 3 and 4).

Poultry Services Section

The blood testing of breeding flocks for pul-lorum disease and fowl typhoid continued at an increasingly high level during this past two-year period. Hatchery inspections for compliance with provisions of the National Poultry Improvement Plan and the National Turkey Improvement Plan increased, as did the frequency of hatchery air sampling for bacterial and mold contamination.

Under new provisions of the National Plans, turkey breeding flocks have been officially blood tested and rated as *M. gallisepticum* tested. Chicken breeding flocks are being random tested for *M. gallisepticum*, but without official rating, as a service to the hatcheries.

The Poultry Services Section continues to certify hatching eggs and chicks for export at a high level to foreign countries. During this period export shipments of started pullets to Latin countries showed a sharp increase.

The laryngotracheitis control program has effectively resisted the spread of this disease. During the period July 1, 1964 to June 30, 1966, five poultry farms in Central Florida experienced outbreaks. Control measures have now been lifted from three of the farms, and it is anticipated that the remaining two will be free of control measures shortly. A requirement that no poultry may move into the State which have been vaccinated against or exposed to laryngotracheitis continues in effect (See Table 5).

Mastitis Section

A primary factor in mastitis control is knowledge of the disease as well as conditions leading to a favorable environment for its existence; therefore, the use of visual aids, demonstrations and illustra-



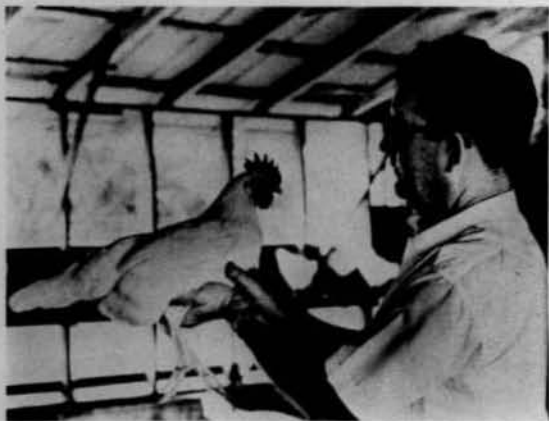
Suspected cases of hog cholera are quickly quarantined.

tions has enlightened dairy personnel in methods for avoiding and combating mastitis. A number of large and small group discussions were conducted over the State during the past two years for the purpose of acquainting dairy owners and operators with conditions leading to udder infection.

The mastitis laboratory pointed out a large number of ineffective drugs through sensitivity testing, which, in many instances, sparked an effective treatment program through scientific methods. Also, dairymen and veterinarians in various areas of the State have developed effective dry cow treatment programs using microscopic identification of bacteria as a criterion from which to work.

Mastitis vaccines produced by various pharmaceutical companies were field tested by the Mastitis Section in cooperation with the Veterinary Science Department of the University of Florida and practicing veterinarians. Animals selected through laboratory analysis of milk and blood samples were vaccinated and observed throughout their lactation periods, with periodic laboratory investigation so as to provide factual data on vaccine efficacy. The vaccines presently available proved to be of little or no value in controlling mastitis.

The employment of technical instruments for examining milking equipment and milking systems pointed out malfunctioning machinery as well as pumps and lines which were insufficient to carry out jobs assigned to them. As a result, many dairymen have repaired mechanical systems and have been made aware of the necessity of installing



Poultry are constantly checked for diseases by Animal Industry Division inspectors.

properly sized equipment for their individual operations. Equipment manufacturing companies have been apprised of the importance of upgrading their equipment which has resulted in the production, sale and installation of more efficient machinery (See Table 6).

Meat Inspection Section

The activities of the Meat Inspection Section are extremely broad. The duties of this Section include the antemortem and postmortem inspection of animals, and supervision of sanitation of packing establishments and equipment. This Section controls the use of ingredients in compounding meat products and oversees the proper labeling of such products to assure that they are not misrepresented in any manner to the consuming public. Employees of this Section are also charged with the responsibility of enforcing the statutes relating to humane slaughter of animals.

The Meat Inspection Section certifies meat products for Dade, Manatee and Pinellas County school systems. This involves constant supervision of preparation of meat and meat food products supplied to these school systems to see that all standards set forth in the bid specifications are met. Over two million pounds of product per semester are certified for schools in these three counties.

During this biennium, this Section instituted this same service of certifying meat products purchased by state institutions. Previously only those establishments which have U. S. Meat Grading Service were eligible to bid on state contracts, and

the cost of this grading service made it prohibitive for many packers to bid.

The Florida meat inspection service now furnishes this certification service without additional cost to the packer since its inspectional personnel are already present in the plant. This has resulted in putting more Florida establishments in a position to bid on these state contracts, with more competitive prices to the State for supplying meat food products to these institutions.

Many improvements have occurred in the construction and expansion of meat packing establishments in the State. There has been a trend in the industry toward improved physical structures, more modern machinery, and increased volume of product. This trend is expected to continue.

Diagnostic Laboratories Section

It is the purpose of the Diagnostic Laboratories Section to furnish prompt, accurate laboratory diagnostic service to the livestock, poultry and pet owning public of the State in order that specific treatment can be started and animals saved that would be lost if this type of treatment were delayed.

The laboratories system consists of the main



Pathology tests are carried on in the Department's Animal Disease Diagnostic Laboratories.

laboratory located at Kissimmee, and branches at Miami, Dade City, Live Oak, Cottondale and Callahan. The scope of services offered by these laboratories and the training of their staffs, along with the physical facilities and equipment, make the diagnostic laboratory system in Florida one of the best in the United States.

The case load at the laboratories has shown a steady increase each month. In addition to routine diagnostic work, the staffs of the laboratories are continually improving diagnostic techniques by developing new methods. New diseases discovered for the first time in the United States or in Florida, notably equine piroplasmiasis and "redwater disease," have been described by members of the staff of the main laboratory at Kissimmee.

Veterinarians and livestock owners are kept aware of the current disease situation by monthly articles appearing in *The Florida Cattleman*, and bimonthly articles in *The Florida Horse*. During this past biennium, staff members have participated in many program presentations at local, state and national veterinary meetings, and held annual courses for veterinarians on clinical demonstrations in cooperation with local veterinary associations. A course was held on porpoise diseases, and a laboratory was developed for the detection of "doping" in race horses not served by the Racing Commission.

In the branch laboratories primarily serving the poultry industry, special projects were carried out for the assistance of the poultrymen with problems that are not routine. An investigation of fowl pox vaccine that was producing disastrous effects on poultry flocks in the northern portion of the State resulted in removal of the vaccine from the market.

One laboratory produced on an emergency basis a product to protect against epidemic tremor in a large poultry breeding operation during the time that the federal government had recalled the commercial vaccine from the market.

Special projects were conducted during the biennium on Gumboro disease in poultry, and an internal parasite surveillance at the Florida Swine Evaluation Center. This latter project involved the regular sampling of swine submitted to the Center throughout the growing period and postmortem examination after slaughter to determine kinds and numbers of internal parasites present, thus

evaluating both the parasite population on Florida swine farms and the efficiency of parasite control methods.

Equine Disease Control Section

During this biennial period, all of the individual horses that were quarantined because of a positive diagnosis of equine piroplasmiasis were released from quarantine. This was accomplished by treatment with drugs that had been determined by clinical research to remove the carrier state of the disease. After treatment of these formerly infected horses, whole blood was transferred from these horses into test horses or ponies to determine the infective status. Of the four experimental drugs used, all were determined to be 100% effective in the removal of the carrier state when used at proper dose levels.

This field study revealed valuable data in regard to two different types of serological tests for equine piroplasmiasis to determine the infective status of individual horses. Comparisons of this data compiled by this section on approximately 75 cases of field and experimentally infected cases indicated the accuracy of one of the serological tests was substantially higher than the other. A portion of the field work involving drug studies and subinoculations was carried out with cooperation of the Veterinary Science Department of the University of Florida.

The vector control program relating to the control of tropical horse ticks on infested prem-



State veterinarian draws blood sample from horse to test for equine piroplasmiasis.

ises has proven its value. This is predicated on the fact that all new cases of equine piroplasmosis during this period occurred on premises that had tropical horse ticks present.

A survey by inoculation and serology on horses at the Brighton Indian Reservation in Glades County revealed approximately a 35% incidence of equine piroplasmosis. All horses that were positive serologically were treated with carrier removal drugs, and test horses were inoculated to evaluate their disease status.

These drug studies were carried out in cooperation with the Veterinary Science Department of the University of Florida. The incidence of tropical horse ticks which was high in the summer of 1964 was reduced to zero following six

months of 21-day interval sprayings.

During this reporting period, beginning in February, 1966, the Equine Disease Control Section has been involved in some experimental work on equine infectious anemia. Horse inoculation tests have been conducted to determine the diagnosis of infectious anemia and these inoculation results are being compared with experimental precipitin test results conducted by Texas A & M University.

A cooperative study has also been instigated in conjunction with a research team in the Biological Science Department at Florida Atlantic University. These studies involve the development of a reliable diagnostic laboratory test for equine infectious anemia.

Division of Chemistry

Under the Agricultural Reorganization Act of 1959 the Division of Inspection and the Division of Chemistry jointly are responsible for the enforcement of several consumer protection laws.

The Division of Inspection obtains samples and handles the follow-up enforcement action in the field. The Division of Chemistry conducts all analyses and handles the technical aspects of enforcing these laws.

During the biennium, the Division of Chemistry analyzed 67,188 samples of feed, fertilizer, food, pesticides, seed, and miscellaneous products. The total number of analyses, tests, and determinations conducted during the biennium was 452,968.

This total does not include the hundreds of analyses made in conducting research work on new methods or in conjunction with other investigative work in attempting to improve present methods.

During the biennium, a new activity was undertaken by the Pesticide Residue Section and is now being transferred to the Pesticide Section. This program will study and investigate cross contamination of pesticides in order to prevent unauthorized pesticides to find their way into food products that are sold in Florida and shipped out of the State.

When this cross contamination is found in pesticides, the products are taken off the market and not allowed to be sold for certain uses.

During the biennium, a Food Consultant was added to the staff of the Division of Chemistry to enable a comprehensive study of foods offered for sale in Florida. Many labels on food products have been found misleading, and these are being studied to determine if they should be changed or if the products themselves should be banned from the market.

Administrative Section

The Administrative Section, as the name implies, has the responsibility of conducting the activities of the entire Division of Chemistry in the areas of personnel, budgeting, purchasing of sup-

plies, maintenance of laboratories and equipment, and general supervision of all of the other sections in the Division. The sample preparation room also comes under the supervision of this section.

Feed Section

The Feed Section is responsible for the enforcement of the Florida Commercial Feed Law, Chapter 580 of the Florida Statutes. Among the many analyses made on animal and poultry feeds by this section are protein, fat, fiber, ash, moisture, calcium, phosphorous, salt, iron, copper, cobalt, manganese, sulfaquinoxaline, phenothiazine, aureomycin, and vitamins. Microscopic analyses are also made on each sample submitted to the laboratory for checking (See Table 7).

Fertilizer Section

The Fertilizer Section is responsible for the enforcement of the Florida Commercial Fertilizer Law, Chapter 576 of the Florida Statutes. Official samples of commercial fertilizer are analyzed for nitrogen, phosphate, potash, calcium, manganese, magnesium, copper, zinc, iron, aluminum, sulfur, boron, molybdenum, cobalt, chlorine, and pesticides when any of these ingredients are shown to be present on the guarantee tag.

Samples of dolomite and limestone are analyzed to determine if the guarantees are met as to content of magnesium and calcium. Screen tests are also run on these two materials. Microscopic examinations of fertilizer samples are also conducted to determine if the materials, as guaranteed, are present in the fertilizer samples submitted.

The rules and regulations that are necessary for the implementation of the Florida Commercial Fertilizer Law have been completely rewritten and are now in force (See Table 8).

Food Section

The Food Section is responsible for the food provisions of the Florida Food, Drug and Cosmetic Law, Chapter 500 of the Florida Statutes.

The State Board of Health enforces the drug, cosmetic, and device provisions of this law. This law is patterned after the Federal Food, Drug and Cosmetic Act and the Florida Department of Agriculture cooperates very closely with the FDA. This law protects the public from injury and merchandising deceit.

Standards have been adopted for most of the foods found on the market at the present time. The Food Section makes chemical analyses for composition of many foods and checks foods for adulterations and to determine if these foods conform to the adopted standards.

Foods are checked for filth and extraneous matter; to determine if there are any injurious components such as dyes, mineral oil and other components that might be deleterious to humans; bacteriological examinations are also made on many products. Meat analyses are made for the Purchasing Commission and Public School Boards (See Table 9).



Chemist checks for mold and insects in nuts being sold to the public.



Microscope is used to detect dead or live insects in candied fruit product.

Methods Development Section

The Methods Development Section was added during this biennium. This section was added to fill a need for development of new methods and studies of methods now in use that need revision. With the rapid changes in laboratory techniques and laboratory instrumentation, this section is servicing all laboratories in a very useful way.

The first study undertaken by this section was to evaluate present methods and develop new methods for detection of pesticide residues. In order to make methods uniform, a great deal of time and effort was expended in compiling a comprehensive methods manual.

This manual is in two volumes and is now being used in other state laboratories, consulting laboratories, and in foreign countries.

Pesticide Section

The Pesticide Section enforces the Florida Pesticide Law, Chapter 876 of the Florida Statutes. This law provides for the control of labeling and quality control of guaranteed analysis of pesticides. Because of the highly toxic nature of most pesticides, labeling and proper directions for use and warnings against use is extremely important.

Commercial pesticides are checked for metals,

chlorinated hydrocarbons, organic phosphates and many other ingredients. This section is now responsible for the detection of cross contamination of pesticides as indicated above.

Pesticide regulations have been completely revised to bring them up to date (See Table 10).

Pesticide Residue Section

The Pesticide Residue Section was established to control pesticide residues on all foods and feeds. Authority for this work is contained in the Florida Food, Drug and Cosmetic Law. This work is a very important segment of the Department as it protects the public and controls the indiscriminant use of pesticides on crops and feed stuffs.

Some of the products checked are vegetables, fruit, milk, eggs, and commercial feeds. Residue analyses are among the most difficult for an analyst as the tolerances range from zero to 100 p.p.m.

These analyses require very sensitive and expen-



Eggs are checked by laboratory technician for pesticide contamination.



Laboratory assistant inspects seeds in germination test.

sive instruments and many of the analytical methods now being used have been developed in these laboratories. The headquarters' laboratory is located in Tallahassee with a branch laboratory in Sanford and two mobile laboratories now located in Miami and Plant City (See Table 11).

Seed Section

The Seed Section enforces the Florida Seed Law, Chapter 578, and the Florida Seed Certification Law, Chapter 575, of the Florida Statutes. This section is responsible for the labeling and quality control of seeds sold in Florida.

Among the determinations made in this section are germination, pure seed, hard seed, firm seed, weed seed, noxious seed, inert matter, and variety. The Seed Arbitration Committee investigates complaints on poor seed and recommends damage payments (See Table 12).

Division of Dairy Industry

The Dairy Division was created in 1929 because only the larger cities of the State maintained sanitary milk programs. In addition, large quantities of milk and milk products—such as fluid milk, sweet cream, condensed milk, cottage cheese and frozen desserts—were being shipped into the State from uncontrolled areas. Supplies of these products were purchased from out-of-state sources on a price basis only.

At that time, the shelf-life of milk and milk products was so short, even after repasteurization, that the milk industry demanded a State law controlling all milk products. As a result, the State Legislature passed a Milk, Cream and Milk Products Law (Chapter 502 of the Florida Statutes). At a later date, Chapter 503 (Frozen Desserts Law) was passed, and the Commissioner of Agriculture was authorized to enforce both laws.

The purpose of these Chapters is to assure the people of Florida that milk and milk products offered for sale to the public are produced under sanitary conditions, are wholesome and fit for human consumption, and correctly labeled as to grade, quality and source of production.

Milk and Milk Products

At least once each six months, dairy specialists visit all producers in their areas and complete a Dairy Farm Inspection Report for each. There are twenty-one major categories, as well as numerous sub-categories, which must be closely scrutinized. Among these are cows, milk barn, stable or parlor, milk house or room, cleaning facilities, lavatory and water supply, utensils and equipment, milking procedure, personnel, cooling system, vehicles, insects, and rodents.

Each item on the inspection report has a numerical value. A sanitary rating of 90 percent efficiency is required at all times in order to furnish raw milk to a milk plant for pasteurization.

In addition to completing detailed survey sheets or score sheets, dairy specialists conduct visual inspections of processors and producers at several

intervals during the year. Other duties of dairy specialists include assuring that each distributor obtains an annual license, submitting monthly reports, approving labels, and enforcing regulations against chemical and bacteriological violations (See Table 13).

Frozen Desserts

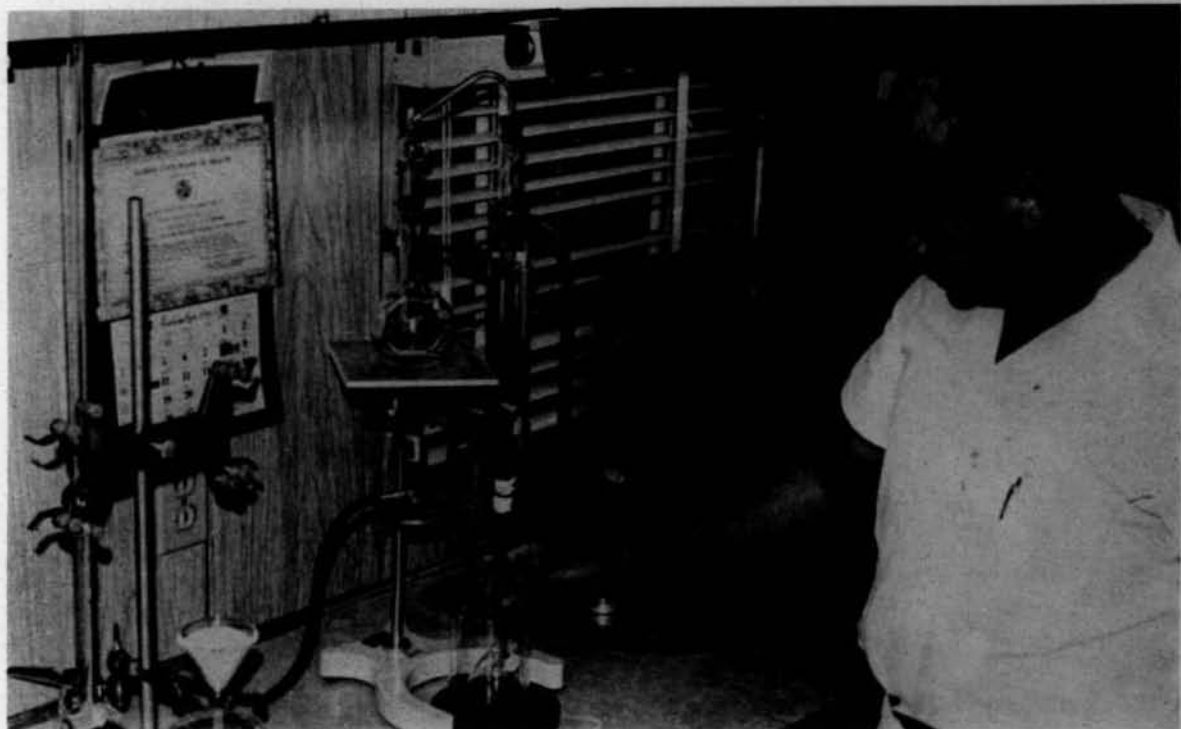
The Frozen Desserts Law enforcement is also a function of the Dairy Division. In addition to large wholesale plants, there are several hundred drive-in retail operators in Florida and a number of manufacturers of frozen desserts mix.

Frozen desserts manufacturing operations are inspected on a basis similar to the procedures followed for milk and milk products plants. Dairy specialists complete a survey or score sheet at least once each six months and make many visual inspections every day.

Since the development of plastic containers, plastic coated paper and wax coated paper, regulations have been established for sanitary control in their production.



Cartons of milk are inspected prior to shipment to retail store.



Mobile laboratories are used in the field to inspect Florida dairies.

Survey or score sheets have been developed for grading these manufacturing plants. Among items inspected are floors, walls, ceilings, doors and windows, light and ventilation, water supply, sanitation facilities, storage of finished products, disposal of wastes, locker and lunch rooms, waxes, adhesives and inks, wrapping and shipping.

The dairy specialist must be familiar with the manufacture of various containers in order to intelligently report upon the operation and correct discrepancies, if any (See Table 13).

Mobile Laboratories

The Dairy Division operates two mobile laboratories. One is assigned to the East Coast and covers the area from Palm Beach County to Key West, as

well as a portion of central Florida, from Bradenton to Miami. The other operates between Pinellas and Duval Counties.

The two mobile laboratories are of special construction and are equipped to comply with all rules and regulations prescribed by the American Public Health Association, Association of Official Agricultural Chemists, and the U. S. Public Health Service.

Personnel who man these laboratories must have specialized training. A bacteriologist, chemist, two assistants and a laboratory technician are assigned to each mobile laboratory. These men work together in collecting samples, examinations, making reports, and furnishing information to all parties concerned (See Table 14).

Division of Fruit and Vegetable Inspection

Services performed by the Division of Fruit and Vegetable Inspection include inspection for grade and maturity of citrus and enforcement of the Florida Citrus Code and regulations of the Florida Citrus Commission.

It also has the responsibility of inspecting all vegetables, melons, nuts and miscellaneous fruit.

Training Section

Since the last biennial report, the Training Section has grown from one full-time instructor and three part-time instructors to a staff of seven men.

The Training Section has also held two-week long training classes, preparing 30 men as instructors in various sections of the State. These men will conduct local training or refresher classes.

The Section is constantly improving its methods of instruction to keep pace with the progress of the industry.

Refresher classes are held at the beginning of each citrus season for men reporting back into the State, and training classes are conducted for all new men working in the Division.

The Training Section also cooperates with the

federal government, instructing foreign representatives of agriculture, marketing and marketing news services.

At the direction of the Commissioner of Agriculture and under supervision of the Division Director, the Section has kept abreast of the industry, through "directed training with visual aids". Our inspectors are sent into the field with a better knowledge of inspection methods and the ability to render better service.

Vegetable Section

The Vegetable Section furnishes inspectors to growers and shippers of the State to determine grade, quality and condition of various fruits, nuts and vegetables.

The Section also inspects limes and avocados under the Federal Marketing Agreement and Order; and farmer stock peanuts under the Price Support Program.

With the exception of limes, avocados and peanuts, this service is furnished to the growers on a voluntary basis.

The Section develops new techniques for improving services.

For example, all the human element has been eliminated from the inspection of farmer stock peanuts. Developed and in operation are pneumatic samplers, mechanical dividers, presizers, shaker and sizer screens, shellers, splitters and foreign material dividers.

All of this equipment tends to do a better and more effective job for the producers and processors (See Table 15).

Citrus Section

The Citrus Section supervises and inspects all citrus fruits, both canned and fresh, and interprets U. S. Grade Standards and regulations of the Growers Administrative Committee and the Florida Citrus Commission.

In addition, this Section operates the personnel department for the Division and maintains its own



Fruit inspectors receive training in the use of the Kinsey Sampler testing equipment.



Vegetable inspectors check sweet corn in field as it is being harvested.

statistical department and fiscal section.

The personnel office is responsible for hiring, training, and assigning approximately 500 field inspectors each season.

Maintaining personnel records for field inspectors is difficult. Inspectors are moved to different inspection points several times a season, and records must accurately indicate where one each can be located at any given time. In addition, this office is responsible for issuing payroll checks, adjustment of salaries, insurance coverage, and other personnel information.

The office remains in direct contact with the USDA Personnel Office in Washington, D. C., and personnel offices in all other states to maintain year-round assignments for individual inspectors, and to provide a backlog of inspectors to use on assignments in Florida.

Statistical Department

The statistical department, which consists of auditing, data processing and filing departments, is

staffed by 23 employees. In addition to the thousands of certificates checked and audited, the department receives information each morning from field offices regarding the shipments of the previous day.

This information is sent to the wire services who furnish information to radio and television stations. The data processing section compiles data for the statistical, fiscal, technical, bond & license and personnel sections. All citrus dealer files and agent registrations are now compiled by this section.

All fiscal and financial business of the Citrus Section is handled by the fiscal office. Revenue from all citrus inspection in the State is handled in this office, as well as necessary purchasing and expenditures.

Payrolls for the entire Division of Fruit and Vegetable Inspection are prepared in this office.

The recently developed mail, supply and duplicating office issues all supplies to the field force.

The fiscal office supervises the operation of the Florida Room, newly developed training room

and hearing room, all office space, and the auditorium of the Winter Haven building. The auditorium is widely used by agricultural and related interests, and governmental groups at the state, county and municipal levels. It is the largest auditorium in the area and, as such, serves as a municipal auditorium.

A system of cost accounting has been developed to establish a method of accurately determining the cost of inspection of fresh fruit to packing-houses and canneries. This department furnishes the industry with information necessary to establish fees for inspection, based on the actual cost. (See Table 16).

Citrus Technical Section

This Section is responsible for all technical duties in connection with administration of the Citrus Code.

Routine duties include analysis and approval of fruit treatment materials, preparation and issuance of field equipment and chemicals for maturity testing and internal quality and enforcement of the arsenic spray program.

Also included are coordination of fresh fruit testing at processing plants with the finished product inspection, furnishing technical consulting services to the industry, both fresh and processed; and since 1961, monitoring of pesticide residues on citrus fruits—a program which now includes the use of gas chromatography and other modern techniques.

In addition, the development of load evaluation procedures at processing plants, including better testing methods and equipment, is a continuous field responsibility of this Section.

Although details of all work of the Section may be found in the annual reports of the Division, a large portion of the activities during the biennium was directed toward improvement of sampling systems and juice extraction equipment in the test-rooms at processing plants. Practically all citrus fruit at such plants is now purchased or handled on the basis of internal quality, as certified by inspectors of this Division.

In this connection, during the past two seasons, a new sampling system known as the "Kinsey Sampler" was field-tested and subsequently installed in six plants.

Much additional research and field-testing dur-

ing the biennium have gone into the testroom juice extraction equipment for processing plants, and this work is nearing completion.

The entire program for better load evaluation procedures is vitally important to the industry. This Division's constant efforts are only part of a vast research program underwritten by the Florida Citrus Commission, the United States Department of Agriculture, and the Florida Department of Agriculture.

Citrus Bond and License Section

This Section receives from the Florida Citrus Commission approved applications from firms and individuals desiring to do business as citrus fruit dealers.

Each applicant posts a surety or cash bond with the Commissioner of Agriculture in support of a license. Dealers who handle only their own fruit, cooperative marketing associations handling their members' fruit, and dealers acting only as brokers are considered Bond-Exempt.

All dealers who have agents representing them must make application to the Commissioner of Agriculture, and all agents must have fingerprints on file.

Monthly reports advising the amount of fruit handled by each licensed dealer must be made to this Section, to determine that each dealer has sufficient bond posted with the Commissioner of Agriculture.

Complaints are made to the Commissioner of Agriculture by filing the necessary supporting information with this Section. Producers and dealers in citrus may bring action against any other dealer, provided the facts warrant such action.

Hearings are held during which testimony is taken. From this information, the Commissioner of Agriculture will enter the necessary order, either affirming or denying the claim. Compliance with any order of the Commissioner of Agriculture is enforced by this Section.

This Section conducts investigations of complaints involving dealers in possible violation of the Florida Citrus Code and the Florida Citrus Commission regulations. Examiners work closely with law enforcement agencies when any licensed dealer or his agent is involved, to determine if any action is necessary to suspend or revoke a license (See Table 17).

Division of Inspection

The prime objective of the Division of Inspection is to provide the consuming public, the scrupulous processor and the reputable vendor a qualitative-quantitative protection.

This protection is afforded through a media of inspectional services authorized by the various Florida laws enforced by the Division. The Florida laws are: Food, Drug and Cosmetic; Poultry; Egg; Feed; Fertilizer; Pesticide; Seed; Seed Certification; and Weights and Measures.

In addition, the Division also assists in enforcing portions of the Federal-State Marketing Agreement; Florida Citrus Law; the Department's Health Requirements and Regulations; and Honey Certification Law.

One of the end products of agricultural endeavors, foodstuffs, either in the fresh form or processed, are examined and sampled to ascertain their wholesomeness and the propriety of their labeling. The commodities utilized by the agricultural producers—fertilizers, feeds, seeds and pesticides—are also regulated to ascertain the correctness of the label statements.

This includes visual examination, on-the-spot weightings, and sampling for laboratory analyses. Because of the diversification of the inspection services proffered and to more economically and effectively accomplish the involved tasks, the Division is segmented into four distinct field entities, specifically: the Food Grades and Standards Section; the Fertilizer, Feed, Seed, and Pesticide Section; the Poultry and Egg Section; and the Road Guard Section.

All records, reports and statistics pertaining to the laws regulated by the Division are maintained by this Division's administrative unit in the Tallahassee headquarters.

During the biennium covered by this report and commensurate with the needs of our growing state, the advent of new products, innovations in merchandising and scientific advances, all sections continued to update and expand their respective programs and inspectional techniques and pro-

cesses. For these reasons, new fertilizer and pesticide laws were enacted and, when necessary, other existing laws were amended.

Food Grades and Standards Section

The scope of the Food Grades and Standards Section was extended to include the inspection of foodstuffs and other regulated commodities in possession of school lunchrooms and state institutions.

Concurrently, a successful concerted drive was initiated to rid the market place of several devious operators specializing in meat products. Information and evidence collected by the Division enabled the Department's attorneys to institute legal action and thereby curtail the activities of "bait and switch" practitioners.

Comparative figures for this period as opposed to the preceding period reveal the following categorical increases: 1,008 samples collected, 777,755 packages destroyed, 629,412 pounds and 550,076 packages stopsaled. These regulatory actions were necessary because the foodstuffs were found to be



Foods in retail stores are constantly checked by Department inspectors.



A road guard inspection team checks a load of livestock being transported within Florida.

unwholesome due to insect depredations or deleterious growths, damage caused by hurricanes, floods, and fires (See Table 18).

Poultry and Egg Section

The tempo of activity experienced by the Poultry and Egg Section matched the demands of the growing population. The volume of poultry and eggs inspected for grade and wholesomeness increased during the two-year period and much emphasis was placed on in-plant inspections and frozen eggs.

Samples of the latter were collected and tested for bacteria and Salmonella. Samples of poultry and eggs were also collected and analyzed for pesticide residues.

It is interesting to note that during this biennium the poultry stopsaled exceeded by approximately 10,000 pounds that stopsaled in the preceding biennium, and the number of cases of eggs stopsaled showed an increase of 5,984 cases (See Tables 19 & 20).

Fertilizer, Feed, Seed and Pesticide Section

Official samples of fertilizer, feed, seed and pesticide collected reflected a marked increase over the 1962-1964 period, as did the number or reg-

istrations of these commodities. Fertilizer registrations were augmented by some 14,000 and the fertilizer tonnage consumed during this period was 5,012,617 tons, which was an increase of 646,947 tons over the previous biennium.

It is of interest to note that the distribution of bulk fertilizers and liquid fertilizers increased sharply and the number of official fertilizer samples collected exceeded the 1962-1964 totals by 2,405 samples.

The new fertilizer law effectuated January 1, 1966 altered the method of inspection fee payment. The new method precludes the payment of fees with inspection fee stamps or tags. Fees now must be paid by a reporting system; however, the rate of payment remains unchanged.

Provisions of the new law require that product labeling be more informative than in the past. To permit consumers freedom of selectivity, the new law is unchanged in regard to number of grades acceptable for registrations. No grade limits were imposed.

As in the case of fertilizer, official samples of pesticides showed a marked increase, 2,816 samples, over the previous period and many of the samples were analyzed for possible cross-contamination. One of the features of the new pesticide law is the expanded definition of the term pesticide—the expansion now brings within the purview of the law, plant regulators, defoliants, and desiccants which were not previously regulated (See Tables 21 through 30).

Road Guard Section

Evidence of the citrus industry's recovery from the ravages of the 1962 freeze was expressed by the increased fresh orange traffic passing road guard stations. Simultaneously, processed citrus products destined for points outside the state also showed a marked increase.

It is interesting to note, however, that statistics compiled by this section revealed that during the last biennium, pullets imported into the state almost doubled those reported in the 1962-1964 period. It was also noted that approximately 238,000 more cases of eggs entered the state during this reporting period, far exceeding the previous figure (See Table 31).

Division of Marketing

The services offered by the Division of Marketing, since its creation in 1961, have both grown and widened in scope.

Charged with a variety of areas of responsibility, the Division is composed of five sections. The duties of these sections range from advertising-promotion to State Farmers' Markets, to crop and livestock market news reporting, to exports, to the administration of the Sunflavor Seal of Quality program.

Administration Section

This section is responsible for the administration and coordination of the Division of Marketing; regulation of the sale of leaf tobacco; enforcement of the provisions of marketing laws; and the Sunflavor Seal of Quality Program.

Throughout the biennium, the Section devoted much time to administering marketing orders in celery and sweet corn and conducted commodity price analysis.

Further, the Section collected and tabulated statistical data to determine the effect of various types of marketing programs and met with farm groups, at their request, to give advice and counsel on methods of attacking marketing problems.

In administering the Sunflavor Seal of Quality Program, the activities of the Section included: licensing of interested producer-shippers, servicing licensees, attending industry and allied industry meetings and informing the industry of the benefits of the Sunflavor program.

Recognizing the growing importance of exporting Florida agricultural products to foreign countries, the Section has developed an export marketing program.

State Farmers' Markets

The Florida State Farmers' Markets is a Section of the Division of Marketing, with headquarters office located in Winter Haven. The 15 Vegetable Markets, 3 Livestock Markets and 9 Agricul-



State Farmer's Markets are operated by the Department to assist the farmer in selling his products.

tural Crops & Livestock Pavilions are located in various production areas throughout the State.

Largely self-supporting, these Markets are maintained through income from a combination of package fees, platform space, packing house and office rentals, commissions and concessions. These Markets were built to serve local producers and buyers by providing facilities for assembling and marketing Florida produce. Effective competition is maintained through volume production and marketing, thereby assuring fair prices to all growers and buyers, regardless of size.

Marketing Advisory Committees, composed of local producers and agricultural leaders, have been organized for several Markets. They are proving to be most beneficial in upgrading Market facilities, improving quality of produce shipped through Markets, and increasing services rendered.

Services offered, as well as the methods of sale, vary from Market to Market. They include auctions, direct sales and broker sales, with shipping point inspection available. Produce is often sold by samples, resulting in satisfaction to both producers and buyers. The volume varies greatly—from carlots to small truck loads—supplying purchasers' needs in numerous varieties of excellent quality produce.

Revenue from Florida State Farmers' Markets during the 1964-1966 biennium was \$784,674.20 and Net Excess of Revenue over Expenditures amounted to \$155,732.49 (excluding assessment charges on deposits). Gross sales at Vegetable Markets totaled \$116,226,592.84. Livestock Markets handled a total of 44,819,700 pounds, which sold for \$7,942,143.71, an increase of \$2,431,885.23 in Gross Sales over the previous biennium.

In spite of two major fires and a disastrous hurricane, the Markets experienced one of the best bienniums in their history.

Reports indicate that Livestock and Crops Pavilions were utilized by the various communities more than ever. Several additions to these facilities have greatly increased their usefulness.

Each State Farmers' Market, with the exception of Suwannee Valley, is managed by a local full-time manager and personnel who provide assistance in selling produce grown or shipped into the area. The Suwannee Valley Market is temporarily being operated by managers from other Markets during their slow seasons. The Markets are opened on a seasonal basis from September to August,

however managers are available at all times to assist growers in planning their farming activities, as well as marketing produce (See Tables 32 through 34).

License and Bond Section

The License and Bond Section is charged with the responsibility of the licensing and bonding of those dealers who purchase or handle agricultural commodities from Florida growers where actual cash is not paid at the immediate time of purchase. This is in order to afford some reasonable assurance to the grower that he will be paid for the products he sells.

During the biennium four field men were stationed in the agricultural areas of the State, and 2,028 personal contacts were made with prospective licensees or unlicensed dealers. Additionally, 7,463 other personal contacts were made in an effort to obtain information, not only as to the activities of unlicensed dealers, but in a way of explanation, as to the requirements and provisions of the Agricultural License and Bond Statute (See Table 35).

Market Promotion Section

The Market Promotion Section's function is one of assisting organized agricultural groups in the promotion of their products. Generally speaking, this is done through the expansion of current markets and the development of new outlets and uses for Florida farm and food products. This is done by generating a greater consumer demand, expanding market areas, improving distribution, innovating new products and processes and any other means of broadening the total markets.

It is accomplished by utilizing four basic promotional tools—merchandising, advertising, publicity and public relations. The mission and capability of these forces is to inform, to mold favorable opinion and to motivate action leading to consumption of Florida agricultural products.

Advertising

Since advertising is the most expensive promotional tool, the Section has been very deliberate with its activity in this area. Advertising specialists provide valuable service to farmer groups by assisting them with the design, layout and placement of all types of advertising. This type assistance is



Florida agricultural products are promoted internationally by the Department.

especially helpful to groups who are not large enough to hire advertising personnel or to retain services of advertising organizations.

During the biennium these specialists also provided consultant services to grower groups, in helping them to evaluate their advertising efforts (See Table 36).

Merchandising

In merchandising efforts the Section seeks to expedite the timely movement of products to the retailer so that they will be adequately available and attractively displayed to encourage consumer buying of Florida products.

In carrying out this activity, MPS personnel prepared and distributed point-of-sale materials throughout the United States. During the past biennium, 460,138 point-of-sale promotion kits were developed and distributed to 355,420 supermarkets

in 46 states for use in promoting Florida farm products.

MPS Field Merchandising Specialists also go into the marketplace where the products are sold or wherever the marketing problems are—advising buyers of the availability of Florida products and setting up special promotions for these products. These specialists also follow-up to build effective mass displays in key outlets.

Another key function performed by the field men is in transmitting valuable information back to our farmer groups regarding trade problems and needs, competitive activities and other important marketing information about their products at wholesale and retail levels. Celery, sweet corn, strawberries, potatoes, pole beans, limes, beef, eggs and foliage were among the commodities which received merchandising assistance from MPS during the past two years (See Table 36).

Public Relations

Many phases of promotion are of an intangible nature and public relations is the most intangible of all. The Section considers its function of public relations as one of rendering services, of promoting good will and of developing a favorable image of Florida agriculture—particularly with those people who play a key role in purchasing of agricultural products.

MPS personnel develop recipes, food service ideas and information, give food service demonstrations and make personal appearances, participate in meetings, conventions, breakfasts, banquets, exhibits—reaching special consumer, trade and professional groups that are important to Florida agriculture.

Two important public relations events are the annual Spring Harvest Festivals in New York and Chicago. These events bring major food editors and food trade executives—a vital link to the millions of American consumers—together with the Commissioner and other leaders of Florida agriculture.

During the past two years, MPS personnel participated in some 100 conventions, conferences and meetings. These specialists also provided exhibits at conventions and conducted numerous intensive recipe development projects, speeches, slide presentations and demonstrations (See Table 36).

Publicity

The objective of this important part of our operation is to furnish for print and broadcast media timely information and service ideas about Florida agricultural products that have sufficient merit and public interest to warrant their usage as legitimate news by the media without charge to the Department or to the Florida farmer.

Our largest amount of publicity obtained was through the food editorial columns of daily and weekly newspapers. This was a direct result of the recipe releases and other interesting food information furnished to these food editors on a regular basis by our home economists.

During the biennium, MPS personnel developed 200 food publicity articles and sent out some 30,000 releases, most of which were accompanied by attractive food photographs. Various publicity materials were developed for use in radio, television and other type programs. Many special releases and



Graded feeder calf sales sponsored by the Department help cattlemen market their livestock.

stories about Florida agriculture were developed upon request of national trade publications (See Table 36).

Sunflavor Seal of Quality Program

During the biennium, all of the tools of promotion, merchandising, advertising, publicity and promotion were utilized in promoting Sunflavor. MPS merchandising specialists set up special campaigns, furnished point-of-sale material and furnished the merchandising needs of the Sunflavor concentrated promotions.

The Section's public relations people developed a large amount of valuable publicity that was coordinated closely with other phases of the Sunflavor program. A modest advertising schedule was conducted during the biennium, aimed at Florida's largest markets, so that the greatest impact could be achieved.

Market News Section

The Market News Section is charged with collecting current market news information and disseminating it to all segments of the industry.

Working in cooperation with the U.S.D.A. the

Section keeps growers, shippers, buyers, merchandisers and other interested parties advised on the daily trading of Florida commodities both at shipping point and northern city markets.

Livestock

Close cooperation with many other governmental agencies and industry groups enables specialists to participate and serve Florida and national agriculture economically in many ways. Much of the work is done routinely in cooperation with the United States Department of Agriculture, such as current market situation and summary reports.

On a broad scope, national livestock grading, marketing and market news meetings are attended periodically, for better assurance of uniform application of standards and procedures.

The Market News Section serves as an important source of basic livestock information and assistance for many individuals and agencies—U.S.D.A., university system, libraries, trade magazines, producers and industry associations.

Specialists serve on numerous livestock grading, marketing, and evaluation committees, and expend much effort toward improving and promoting marketing efficiency in regular marketing channels, as well as through graded and other special sales.

Fruits and Vegetables

Fruit and vegetable market news activities centered around one marketing specialist in Orlando and six seasonal field offices, which were maintained in cooperation with the U.S.D.A. to keep growers, shippers, buyers, produce merchandisers and other interested persons advised on the daily trading of produce both at shipping point and northern city markets. This service provides timely supply and price information, which acts as a stabilizing influence on the trading.

In Orlando, reports on the daily truck movement of Florida vegetables and miscellaneous fruits were compiled as well as on cut flower shipments which move via rail, truck and air freight.

The daily shipments of these items were sent over 12,000 miles of leased teletype wire to market news centers throughout the nation, where the information becomes available to local traders. With Florida a key source for winter produce, the information compiled here is of vital importance to the people directly involved in the selling and buying of fruits and vegetables and flowers.

Various records pertaining to horticultural market news were kept, which were quite helpful in the preparation of special reports that were frequently requested by the industry. Weekly and seasonal reports were published on these products. Annual statistical summaries were issued in cooperation with the Florida Crop and Livestock Reporting Service. A special radio write-up was sent on the AP and UPI press wire during the watermelon season.

Field stations at Belle Glade, Hastings, Pompano and Sanford were opened during the commercial vegetable season to report on prices in the areas and to keep traders of the various vegetables in the State advised on all shipping point quotations, as well as those in the leading city markets. Shipments, city market arrivals and trace inventories were also distributed in the area.

The reporter at Florida City in South Dade County covers vegetables and sub-tropical fruits, and the office there is open the year around. The Lakeland reporter publishes shipment data for citrus, northern auction prices, and watermelon information for the State. The Pompano, Belle Glade and Sanford newsmen all have radio programs for which they prepare daily news write-ups.

The study of better presentation of Market News material continues. Considerable study has been given to the Division's project, "New Data for Decision Makers." Tabulatory summary reports and commodity charts have been designed and published on an exploratory basis during the past two years. The Division anticipates that a useful, well organized *Vegetable Digest* release will be available to the food industry this coming season.



Eggs are one of the many products sold under the Department's Sunflavor seal of quality program.

Poultry and Egg

Early in this biennium, the need for revision in the poultry and egg market news reporting was recognized.

Because marketing procedures were undergoing drastic changes and price determinations were based on national, rather than state or area supply and demand situations, revisions of the program to reflect these changes were mandatory.

The first step in the revised program was the moving of section headquarters to Tampa from Jacksonville, since Tampa would be more centrally located.

Based on a survey and meetings with industry leaders, a new program was recommended with daily markets to be reported for the following areas:

West Central—Northeast Florida
Pensacola—West Florida
Miami—Southeast Florida

Thus, in keeping with industry trends, the Market News Section now covers the movement of a greater volume of commodities through fewer offices and personnel.

A new service offered by the Section and initiated at the urgent request of the processors was the dissemination of Georgia live broiler prices and pertinent market information to Florida poultry processors. This data is obtained daily from Georgia Market News and telephoned to the Florida processors.

The Section also contributed monthly market summaries and charts to *Candled Facts* and provided industry members and associations with statistics and other information needed for marketing decisions.

The Annual Flock Survey was also conducted in cooperation with the Crop and Livestock Reporting Service.

Specialists also assisted with preparing grade standards and in various promotions.

During the biennium, 33,280 daily and semi-weekly poultry and egg reports were mailed to industry members; 13,710 poultry and egg reports

were disseminated by the press and 3,644 reports were released by television and radio media.

One hundred and four market summaries were prepared by the press and the *Florida Field Report* and 525 radio and television broadcasts were conducted.

Florida Crop and Livestock Reporting Service

The Florida Crop and Livestock Reporting Service is a joint undertaking of the Florida Department of Agriculture and U.S.D.A.'s Statistical Reporting Service, and is the official source of production and value statistics for Florida agriculture. A part of the Marketing Division, this Service works closely with other divisions in the Department in the accumulation of basic statistics for agriculture.

Although the Service prepares the official production statistics for the State, it is better known for providing those making production and marketing decisions with information concerning current production. It services the citrus industry with a variety of statistical information, most important of which is the monthly citrus forecast.

During the past year the Service has completed the updating on an inventory of the acreage of Florida citrus by type, age, and location. This effort involved large scale use of aerial photography, a technique that has not been applied previously in any state. Plans are to maintain this inventory on a current basis in the future.

The Service works intensively in the accumulation of current acreage and production information for vegetables. Its weekly reports of acreage planted and the effects of weather on production are widely circulated.

Florida's livestock, poultry, and dairy industries are serviced by the development of accurate statistics pertaining to inventories and production. Advanced statistical techniques are responsible for this accuracy.

This Service assists the Commissioner and the Department by providing detailed economic information on the State's agriculture.

Division of Plant Industry

The Division of Plant Industry is charged with the detection and the control or eradication of plant pests deemed injurious to agricultural and horticultural interests in Florida.

The Division was created as the State Plant Board of Florida in 1915 to fight citrus canker, an Asiatic invader which threatened the entire citrus industry of the State.

Incidents of major importance during the 1964-66 biennium include the investigation of the Caribbean fruit fly, *Anastrepha suspensa* (Loew); an eradication attempt against the imported fire ant, *Solenopsis saevissima richteri* (Forel); and a vast expansion in spreading decline, caused by the burrowing nematode, *Radopholus similis* (Cobb) Thorne.

The 1965 Florida Legislature appropriated funds for the Division to have a permanent home. Plans have been drawn for a 36,000 square-foot building to be constructed on the University of Florida Campus. Construction is expected to begin in the fall of 1966, with occupancy scheduled for the fall of 1967.

Benefits to Florida's agricultural economy through the years may be seen by the Division's successful participation in the following campaigns:

1. Eradication of citrus canker, 1914-32
2. Eradication of Mediterranean fruit fly, 1929-30
3. Eradication of citrus blackfly, 1934-38
4. Eradication of stellate scale, 1953-55
5. Eradication of Mediterranean fruit fly, 1956-57
6. Eradication of erinose mite, 1957-58
7. Eradication of Mediterranean fruit fly, 1962-63
8. Eradication of Mediterranean fruit fly, 1963

Division administration, headquartered in Gainesville, includes the Director, Assistant Director, Fiscal Office, and Information and Education Office.

In addition to the administrative offices, the Division's eight sections are:

Apiary Section

The Apiary Section is primarily responsible for the detection and elimination of honeybee colonies infected with the bee disease, American foulbrood.

The apiary inspectors examined a record 369,663 colonies in 11,513 apiaries, finding only 3,046 colonies in 985 apiaries infected with American foulbrood. The Section issued 270 permits for 55,545 colonies to move into Florida from out of state; and Florida beekeepers were issued 1,466 moving permits and 147 certificates of inspection.

Thorough inspection services provided by Apiary Section personnel are credited with playing a major role in helping Florida remain the third largest honey-producing state in the nation.

Citrus Budwood Section

The Citrus Budwood Section tests outstanding citrus trees for virus diseases and registers those eligible trees. The Section maintains a foundation grove of the finest tested selections as a reserve source of budwood available for distribution to the citrus industry.

During the biennium, 5.5 million registered nursery trees were grown from 51,746 scion sources by 513 program participants.

Large scale application of a recently developed rapid indexing procedure for exocortis virus has presented a challenge to the ingenuity and physical capabilities of the Section. Early results indicate the establishment of an adequate basis for virus determinations, and predict a probable modification of official indexing procedures.

Recording horticultural data on registered parent clones from the budwood foundation grove has been hampered by a tristeza infection which required removal of 67 trees during the biennium. Observations made on older scion groves contributed useful information and helped facilitate elim-

ination of individual tree variants. Cooperative projects are underway with other organizations and individuals to assist in recording varietal horticultural data.

A special nursery block was established for psorosis testing when it became apparent that psorosis virus was transmitted from infected Carrizo citrange parents to their seedling progeny. Inoculations have been made and usable results are expected by April 1967. Final determinations are scheduled for April 1968.

Nearly 100 of the State's leading citrus nurserymen are cooperating in the new "validation" program, which provides authenticated plantings of new citrus varieties released by the University of Florida Citrus Experiment Station and the U.S.D.A. Horticultural Field Station at Orlando. Virus status for each new selection is being established by the Division. Growers are assured of proper handling and authentic variety designation by a voluntary system of control.

Entomology Section

The Entomology Section provides arthropod identification service, conducts limited investigations of economic problems involving mites and insects, maintains the Florida State Collection of Arthropods, describes new species found in surveys, and evaluates existing descriptive works.

Division entomologists made 19,702 identifications during the biennium. An identification may consist of one or many specimens.

The Florida State Collection of Arthropods contains 312,009 pinned specimens, 10,695 vials of specimens in alcohol, and 20,212 insect and mite slides. Several major collections and many grouped donations were acquired by the State Collection during the biennium from museums, individuals, and official collaborators. To date, the Commissioner of Agriculture has appointed 40 collaborators to the Collection. The collaborators, who serve without pay, are making significant contributions to the knowledge of the arthropod fauna of Florida and neighboring areas.

Life history and vector studies are being conducted on a whitefly, *Aleurodicus dispersus* R., in connection with lethal yellows on coconut palms in the Key West-Stock Island area.

The Cuban May beetle has contained to spread. Life history and control studies on the beetle are being made by University of Florida entomologists.

The Caribbean fruit fly continued to spread and had infested 13 South Florida counties by the end of the biennium. The pest destroyed virtually all dooryard fruit in the infested areas.

Work in the Division library is progressing well. Cataloging is in the final stages.

Methods Development Section

The Methods Development Section is responsible for the development or improvement of methods, procedures, and techniques to increase the efficiency of Division operations.



Soil packer follows fumigant tractor to pack fumigant in soil after it has been opened by huge coulters.

The need for improved inspection methods in agricultural areas has long been recognized and is especially true of citrus surveys and grove inspections where great numbers of trees are scattered over large portions of the State.

Infrared photography has shown promise in fulfilling the required improvements. Exploration and evaluation of aerial infrared photography as a means of detecting diseases and pests in citrus groves was assigned to the Methods Development Section.

Two factors which hampered the project from the first were the lack of information and literature on the subject, and the unavailability of an instrument which could measure the infrared reflectance from trees as it would be recorded photographically from the air. Section personnel formulated basic information and data to determine the optimum photographic balances necessary for the detection of diseased trees.

Several thousand photographs have been taken with the exposure of each based on a systematically organized plan. The pictures demonstrate that infrared photography can reveal the presence of both fungal and viral diseases in grove trees, in some cases before disease reaction is apparent to the trained eye.

Infrared color photography, at its present stage of development, can be of great assistance in disease detection, but its potential capabilities are yet to be tapped. To this end, the Methods Development Section is currently working.

Nematology Section

The Nematology Section identifies nematodes from samples submitted in conjunction with regulatory programs, conducts surveys of agricultural and horticultural crops to determine nematode populations present, and investigates methods of control, eradication, and prevention of dissemination of nematode pests.

A record 14,698 samples were processed and diagnosed during the biennium. Joint examination and diagnosis of 528 samples were made in cooperation with the Plant Pathology Section.

Nematode surveys involving 281 samples were made in the field and included citrus nematode in wild habitat. Surveys of ornamentals were conducted to locate test plants for nematocide trials in the road beautification program.

To facilitate plant identification, a herbarium



The Department, in Cooperation with Eastman Kodak Company, is Experimenting with Aerial Infrared Photography to Detect Diseases in Citrus Trees.

was established and the botanical library expanded.

Host testing was continued with grass cyst nematode. Emerald zoisia, *Zoisia japonica*, and Tifgreen Bermuda grass were found to be hosts. Common centipede grass was found to be a non-host in this test.

Inoculation tests involving healthy coconut palm trees and nematodes associated with lethal yellowing affected trees have proven negative.

Host testing was continued with the Pseudoroot-knot nematode of turf. The burrowing nematode host testing program proved three new hosts and indicated seven plants as non-hosts.

The number of samples processed by the Nematology Section during the biennium rose nearly 57 per cent over the previous biennium, from 9,372 in 1962-64 to 14,698 in 1964-66.

Despite the increased workload, the time required to complete samples and send out reports has decreased. A further decrease in processing time is a prime objective in the new biennium.

Plant Inspection Section

Nearly every nursery category enjoyed gains over the previous biennium. Analysis of the past two years' work indicates a leveling off point was possibly reached at the end of the period. The tremendous demand for nursery stock, especially citrus, created by the 1962 freeze was probably supplied during the first half of the biennium.

Florida nursery stock increased seven percent from 360,659,130 plants in 1962-64 to 387,332,842 recorded at the end of the biennium. Increases were noted in citrus, ornamental, and general plant classes.

The number of nurseries under inspection increased three percent from 4,867 to 5,018 during this same period.

A total of 429 acres and 3,864,475 plants were quarantined during the period in an effort to protect industry from dangerous plant pests.

Fiscal 1965-66 was the end of the first five-year citrus survey period. Inspectors visited 20 percent of each citrus-producing county each year. The inspectors compiled information on the number of trees planted on each property, spacing of the trees, varieties of citrus planted in each grove, and the condition of the groves as to any problems or cultural practices which affect production. Figures were supplied to statisticians of the Florida Crop and Livestock Reporting Service who, with data from other field personnel, compile estimates of citrus production for a given crop year. The combining of grove inspection with citrus survey gives the state a systematic method of accomplishing the two jobs at a minimum cost to the State.

Aerial photography was being evaluated as an aid to citrus survey during the second year of the biennium.

New regulations adopted during the biennium restrict the movement of sweet potatoes from one county to another without certification against sweet potato weevil, *Cylas formicarius elegantulus* (Sum.). Adoption of the regulations caused the number of field and packing house inspections to increase sharply.

Imported fire ant treatment was extended to more than 1.2 million acres during the biennium. Landowner participation accounted for 445,534 acres under treatment, where the property owner requested the action and was assessed 50 cents for the first acre and 15 cents for each additional acre. The Florida Department of Agriculture and the U.S.D.A. furnished the additional funds required.

The state and federal agencies joined forces to treat some 787,680 acres on a matching fund basis. Eradication of the imported fire ant was attempted on 450,000 acres in an isolated area around Orlando. Preliminary results indicated success for the program at the close of the period.



Plant specialist inspects exotic ornamentals in a South Florida greenhouse.

Grades and Standards for Nursery Plants, Part II, was published and mailed to all nurseries and stock dealers. The 210-page book contains some 300 photographs and explanations relating to grades of palms and trees.

Sales of "Blue Tag" certified turfgrass increased 90 percent over the previous biennium from 5.4 million square feet to more than 10 million square feet in 1964-66.

New turf nematode regulations, formulated and adopted during the period, should prove helpful to Florida growers. Previous regulations revolved around population counts, regardless of the genera involved. The new regulations are concerned only with those genera proven pathogenic to the turf.

Plant Pathology Section

The Plant Pathology Section provides plant disease identification from samples submitted, carries out field surveys of agricultural and horticultural crops to determine the presence and extent of plant disease, and investigates methods of control, eradication, and prevention of dissemination of plant disease.

Section activities during the biennium include a

record 8,465 specimens processed. An educational orchid disease exhibit was placed in several orchid shows throughout the State.

Surveys were conducted to determine the cause of decline in some of North Florida's young peach orchards and to evaluate the *Ascochyta* ray blight disease in chrysanthemum plantings. The project to determine the cause of lethal yellowing in coconut continues at the Key West test site.

Tristeza, exocortis, and psorosis indexing for the citrus budwood registration program and diagnosis of diseases of citrus, orchids, bromeliads, and fruit and nut crops were conducted at the Winter Haven laboratory.

Specimens of foliage plants, woody ornamentals, trees, turfgrasses, bulbs, and other crops not specifically assigned, were processed at the Gainesville laboratory.

The Section that initiated a new project directed toward establishing a collection of plant pathogenic organisms associated with ornamental plant diseases of Florida. The purpose of this project is to provide a source of plant pathogenic organisms for reference and progressive investigational studies as the need dictates.

In addition to the collection, a documented photographic and prepared slide file of the organisms is being prepared as an addendum to the overall project. The collection will represent an important phase of plant pathology in Florida from the standpoint of education and research.

Special Programs Section

The Special Programs Section operates the fruit fly detection network, directs the training school for new employees, administers the spreading decline program, and participates with the other sections in control and eradication programs.

The Section, in cooperation with the U.S.D.A.'s Plant Pest Control Division, operates about 14,500 fruit fly traps in 47 Florida counties.

The 14,095 Steiner traps are baited with combination lures to detect the Mediterranean, Oriental, Queensland, melon, and Natal fruit flies. Some 400 McPhail traps are tended for the detection of the Mexican fruit fly. The majority of the traps are placed at strategic locations around ports of entry and heavy population centers.

A major problem during the biennium was the Caribbean fruit fly, although it was not declared a

pest to Florida agriculture.

Caribfly larvae were found in Surinam cherry near Miami International Airport in April 1965. Two caribflies were caught in McPhail traps the first week, and by June 30 of that year, 14,000 had been trapped and identified. The fly was not known to be a serious pest of citrus and a decision to "wait and see" was made at a meeting of state and federal regulatory officials and members of the citrus and mango industries.

Seven South Florida counties were infested in 1965 and the fly wintered over to infest 13 counties by the end of the biennium. Virtually all doorway fruit in South Florida was infested in 1966 but no commercial crops were harmed.

Spreading decline of citrus is caused by the burrowing nematode, an eel worm one-fiftieth of an inch long. The nematode feeds on protoplasm of the thin feeder roots of citrus trees.

The 1965 Florida Legislature appropriated \$853,153 to carry on the fight to control and, where possible, to eradicate the burrowing nematode from commercial citrus groves.

The only known method of eliminating the burrowing nematode is "push and treat," in which the



DPI inspector prepares bait for fruit fly traps.

citrus trees and all other vegetation are removed and a fumigant is forced into the soil. During the biennium, 1,291 acres were pushed and treated.

Containment of the burrowing nematode is accomplished by placing a buffer around infested properties to keep the pest from spreading to healthy groves. The buffer must be at least 16 feet wide, stripped of vegetation, and treated with a fumigant every six months.

The Division maintains 305 buffers totaling 221 miles in length. During the biennium, 86 new buffers totaling 307,998 linear feet were installed to protect 308 non-infested properties from 198 infested ones. An additional 55,061 linear feet of buffers were rerouted during the period.

Three training classes were graduated during the biennium. The 16-week course was created in 1958 to train plant specialists in every phase of plant pest regulatory work. The trainees are college graduates with degrees in agriculture or related subjects. Seventeen five-man classes have graduated since the course began.

Information and Education

Information and Education personnel were responsible for publications; news releases; feature articles; the quarterly *DPI News Bulletin*; a monthly house organ, *Reporter*; still, motion picture, and studio photography; visual aids; exhibits; and printing.

Publications printed by the Division during the biennium were:

Arthropods of Florida and Neighboring Land Areas, Vol. 1, Lepidoptera of Florida, By C. P. Kimball

Illustrated Key to Caterpillars on Corn, By G. W. Dekle

Serious Diseases of Citrus Foreign to Florida, By L. C. Knorr

Grades and Standards for Nursery Plants, Part II, Palms and Trees, By C. S. Bush

Florida Armored Scale Insects, By G. W. Dekle

Orchid Diseases, By H. C. Burnett

Arthropods of Florida and Neighboring Land Areas, Vol. 2, The Window Spiders of Florida, By John D. McCrone and Karl J. Stone

Arthropods of Florida, Vol. 3, Florida Armored Scale Insects, By G. W. Dekle

Twenty-Fifth Biennial Report of the Division of Plant Industry

Rules and regulations and articles on programs administered by the Division were carried in the *News Bulletin* which had a controlled circulation of 10,000.

Articles dealing with various activities and programs administered by the Division were prepared and distributed to statewide news media.

Printing requirements by Division sections were channeled through the Information and Education Office in cooperation with the Fiscal Office.

Design, artwork, and construction were provided for portable exhibits in the fields of apiary, turfgrass, orchid disease, imported fire ant, and grades and standards; and permanent exhibits were installed in the Museum of Science and Natural History at Miami.

Division of Standards

The work of the Division of Standards is primarily oriented to protecting the consuming public, but service is also rendered to the affected industries.

This is especially true of the work done by the Weights & Measures Section of the Division, whose accurate calibration of the weighing and measuring devices throughout the State assures a fair transaction to both the buyer and the seller.

In the Gasoline & Oil Section of the Division, the inspection of petroleum products from both a quality and quantity standpoint is designed to protect the consumer. However, the accurate calibration of pumps and meters dispensing these products serves as a safeguard for all parties concerned.

The numerous analyses made by the Section serve to protect the public from sub-standard products, and point out to the industry careless or unscrupulous operators.

In addition to their regular jobs, many employees of the Standards Division have been assigned various responsibilities in the State's Civil Defense program. They have spent many man

hours attending schools and training sessions to better qualify themselves for emergency duty in the event of a national disaster.

Weights and Measures Section

During the biennium, the Weights & Measures Section made routine inspections of 132,388 scales. Of these, 9.1 percent were found not to comply with the Florida Weights & Measures Law.

Among the scales tested were 3,564 prescription scales, 103,338 small capacity scales, 2,679 vehicle scales of the axle-load and wheel-load weigher types, 1,317 livestock and small animal scales, and 21,490 other large capacity scales.

During this period, 102,582 weights used with prescription scales were tested, 2,241 fabric measuring devices and 7,546 linear measures were checked for accuracy.

In the biennium, Weights & Measures inspectors spent many man hours on non-routine assignments such as the calibration of farm milk tanks, assisting in the prevention of fraudulent practices in the selling of meat, and checking net weight and volume of containers used for the collection and sale of fruit and vegetables.

For this two year period, the Weights & Measures Laboratory maintained a perpetual check on all field standards used by inspectors in the Weights & Measures and Gasoline & Oil Sections of the Division.

The laboratory also calibrated weights for authorized scale mechanics and industry, and did calibration on volumetric and gravimetric standards for county and municipal governments having a Weights & Measures program (See Tables 37 through 42).

Gasoline and Oil Section

In its enforcement of the laws governing both the quality and quantity of petroleum products offered for sale to the public, the Gasoline & Oil Section analyzed 113,213 gasoline samples and 25,468 kerosene samples during the past two year pe-



Weights are checked regularly for their accuracy.

riod. Of these samples 1.1 percent were found illegal and action was taken as prescribed by the appropriate law.

A total of 1,702 samples of other products were analyzed which included routine inspection of pre-mixed outboard motor fuels and samples from pumps capable of blending these fuels.

Tested for accuracy of measurement, and other requirements prescribed by law, were 300,152 gasoline pumps, 55,972 kerosene pumps, and 12,173 pumps dispensing other products. In addition to these, 9,298 vehicle tank compartments used as

measures, and 8,369 wholesale meters were calibrated.

The enforcement of the Florida Brake Fluid Law, which regulates the quality of this fluid that may be offered for sale in the State, is the responsibility of the Division of Standards and this work is done in the Gasoline & Oil Section. A total of 781 samples of these fluids were analyzed during the two year period and numerous inspections were made at service stations, garages, and wholesale distribution points to check for misbranded or unregistered brake fluids (See Tables 43 through 46).



Mobile weights and measures laboratory checks the accuracy and capacity of a local gasoline truck.

Florida Department of Agriculture

Statistical Data

(The following statistics cover the period July 1, 1964 to June 30, 1966, unless otherwise indicated)

Table 1
STATE DEPARTMENT OF AGRICULTURE
DEPARTMENT RECEIPTS AND EXPENDITURES

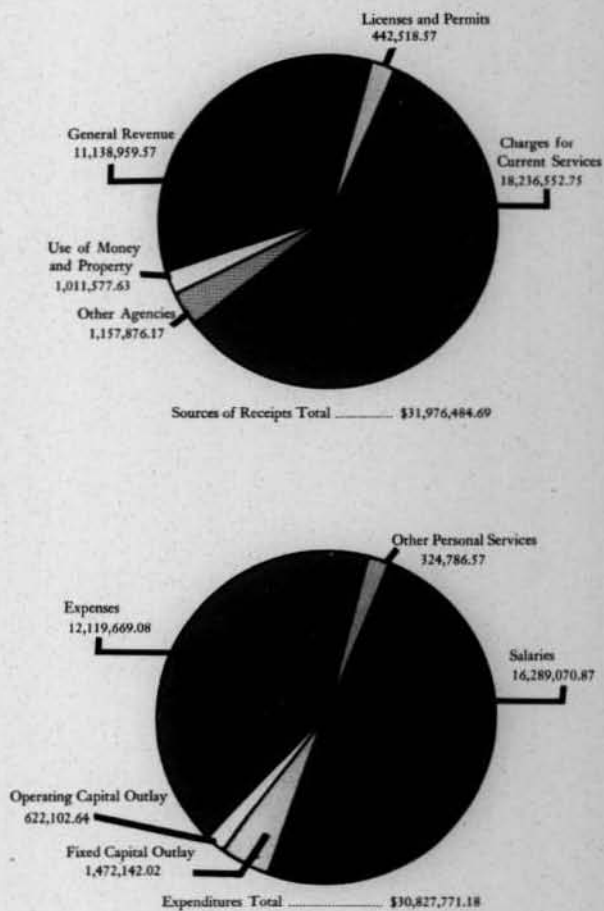


Table 2**BRUCELLOSIS AND TUBERCULOSIS ACTIVITIES**

Number of Cattle tested for Brucellosis	419,566
Percent of Cattle Infected	1.29
Number of Swine tested for Brucellosis	6,414
Percent of Swine Infected	4.02
Number of Calves Vaccinated	274,911
Number of Cattle tested for Tuberculosis	386,517
Percent of Cattle Infected	0.03

Table 3**CONTAGIOUS AND INFECTIOUS DISEASES SECTION**

Cattle inspected at livestock markets	1,295,535
Swine inspected at livestock markets	609,954
Livestock inspected on farms	5,527,499

Table 4**DATA RELATING TO HOG CHOLERA ACTIVITIES**

Number of Garbage Feeders	713
Number of Swine Fed Garbage	57,115
Number of Swine Vaccinated	535,472

Table 5**POULTRY SERVICES SECTION**

Birds tested for Pullorum-Fowl Typhoid	726,306
Foreign exports, Baby chicks	24,877,568
Foreign exports, Hatching eggs, doz.	4,341,068

Table 6**MASTITIS CONTROL ACTIVITIES**

Dairy Cattle Examined	394,176
Milk Samples Analyzed	32,169
Supervised Milking Operations	1,004

Table 7**FEED LABORATORY ANALYSES**

Number of Official Samples Analyzed	9,576
Number of Special Samples Analyzed	940
Number of Illegal Samples	1,443
Percent of Illegal Samples	15.1
Official Determinations Made	89,958
Special Determinations Made	3,760

Table 8**FERTILIZER SAMPLES ANALYZED**

Official Fertilizer Samples	15,421
All Other Samples Analyzed	2,880
Number Found Legal	13,976
Number Found Deficient	1,445
Number Stop-Saled	172
Total Determinations	194,598

Table 9**FOOD SAMPLES ANALYZED**

Number of Official Samples	4,466
Number of Special Samples	342
Number Found Legal	2,549
Total Number of Violations	1,521
Lab Determinations	32,570

Table 10**PESTICIDE SAMPLES ANALYZED**

Number of Samples	9,417
Number of Analyses	18,121
Number of Legal Samples	8,589
Number of Deficient and Misbranded Samples	828

Table 11

PESTICIDE RESIDUE ANALYSIS

Number of Samples Analyzed	8,137
Number of Analyses	13,465
Number of Samples Adulterated	756

Table 12

SEED SAMPLES ANALYZED

Number of Samples	15,939
Number Found Legal	8,564
Number Mislabeled	1,387
Number Found Illegal	300

Table 13

FLORIDA MILK & FROZEN DESSERTS LAWS ENFORCEMENT

Number of calls and inspections pertaining to milk industry and frozen desserts industry	33,435
Number of samples of milk, milk products and frozen desserts	11,632
Number of licenses issued pertaining to all dairy industry	1,585
Number of licenses issued for all frozen desserts industry	2,662
H-T, S-T pasteurizer checked	99

Table 14

ACTIVITIES OF DAIRY MOBILE LABORATORIES

Samples of milk and cream submitted	1,565
Total number of tests of milk and milk products	12,439
Samples of ice cream, ice milk, and frozen desserts	3,089
Total tests on frozen desserts	11,826
Samples of cheese submitted	59
Total tests on cheese samples	493
Total units of frozen desserts weighed	4,407
Laboratories inspected for butterfat testing facilities*	137
Samples collected by laboratory personnel	4,890

* Milk plants' laboratories approved for bacteriological and chemical examinations of milk and milk products

Table 15
VEGETABLES, NUTS, AVOCADOS AND MELONS
CERTIFIED FOR SHIPMENT

Avocados (pounds)	32,191,940
Beans (bushels)	6,950
Blackberries (24-pint crates)	2,217
Broccoli (bushels)	2,225
Cabbage (crates)	1,698,592
Cabbage (bags)	489,000
Carrots (bushels)	69,901
Cauliflower (1¼ bushels)	8,522
Celery (crates)	10,100,729
Chicory (bushels)	2,875
Chinese Cabbage (bushels)	2,369
Corn (crates)	12,435,573
Cucumbers (bushels)	532,969
Dill (bushels)	50
Eggplant (bushels)	21,839
Endive (bushels)	9,978
Escarole (bushels)	7,969
Lettuce (L.A. crates)	18,254
Limes (bushels)	789,808
Parsley (bushels)	23,188
Peaches (bushels)	5,380
Peanuts	
Shelled (pounds)	190,303,874
F.S.-Commercial (tons)	53,426.53
F.S.-Loan (tons)	11,286.28
F.S.-Regrades (tons)	83,980.63
F.S.-Outgrades (tons)	13,169.34
Peppers (bushels)	511,895
Potatoes (100-pound bags)	3,323,255
Radishes (bushels)	57,956
Romaine (crates)	8,047
Squash (bushels)	13,166
Strawberries (24-pint crates)	98,908
Tomatoes (bushels)	10,659,487
Watermelons (melon)	873,050
Cannery Peas (pounds)	3,823,391

Table 16
DISPOSITION OF FLORIDA CITRUS
(Boxes)

Certified Fresh Fruit Shipments	
Grapefruit	26,698,557
Murcotts	360,386
Tangelos	1,260,737
Oranges	25,341,723
Tangerines	4,640,608
Cannery Commercial	
Grapefruit	35,860,844
Murcotts	263,026
Tangelos	415,698
Oranges	152,341,044
Tangerines	2,036,822
Express Shipments	
Grapefruit	550,991
Murcotts	27,562
Tangelos	65,500
Oranges	1,511,476
Tangerines	27,110
Interstate By-Products	
Grapefruit	103
Murcotts	None
Tangelos	None
Oranges	236,509
Tangerines	None
Interstate Non-Commercial	
Grapefruit	3,659,236
Murcotts	64,000
Tangelos	458,065
Oranges	10,335,548
Tangerines	795,460

Table 17

CITRUS BOND & LICENSE SECTION
(Fruit & Vegetable Inspection Division)

Dealers Posting Surety Bonds	2,316
Amount of Surety Bonds	\$24,747,250
Dealers Posting Cash Bonds	9
Amount of Cash Bonds	\$31,750
Amount of Inspection Guarantee Bonds	\$996,027.35
Dealers Posting Performance Bonds	387
Amount of Performance Bonds	\$396,000
Licenses Issued to Bond Exempt Dealers	348
Licenses Issued to Non-Bonded Express and Gift Fruit Shippers (1964-65 Season)	762
Certificates (FCC Reg. 31, Sec. 3) Issued on Request to Dealers Posting Performance Bonds	247
All Citrus Fruit Dealer's Licenses Issued	3,426
Manufacturers Licenses Issued	37
Citrus Packing Houses Registered	457
Canning and/or Concentrate Plants Registered	123
Registered Agents of Citrus Fruit Dealers	2,660
Complaints Disposed Of	140
Complaints Pending	194
Amount Paid to Claimants by Dealers	\$186,027.47
Administrative Hearings	26
Bond Increase Orders Entered by Commissioner of Agriculture Bond Increases requested by Bond & License Section and complied with by dealers	79
Licenses Revoked by Commissioner of Agriculture	393
Licenses Suspended by Commissioner of Agriculture	None
Licenses Cancelled by Commissioner of Agriculture	18
Complaints Paid by Out-of-State Purchasers Against Express Gift Fruit Shippers	23
Amount Paid by Out-of-State Purchasers Against Express Gift Fruit Shippers	69
Licenses Suspended and Reinstated	\$987.47
	None

Table 18**FOOD LAW ENFORCEMENT**

Number of Inspections	136,410
Food Stop-Saled (pounds)	1,584,407
Food Stop-Saled (packages)	704,284
Impure or Adulterated Food Destroyed (pounds)	2,731,217
Impure or Adulterated Food Destroyed (packages)	1,253,646
Irregularity Reports Issued	246
Number of Official Samples Drawn	4,263
Number of Food Packages Weighed	931,846

Table 19**POULTRY LAW ENFORCEMENT**

Number of Inspections	77,240
Poultry Stop-Saled (pounds)	75,012
Poultry Destroyed (pounds)	24,135
Irregularity Reports	307

Table 20**EGG LAW ENFORCEMENT**

Number of Inspections	114,261
Eggs Stop-Saled (cases)	8,742
Eggs Destroyed (dozens)	86,089
Irregularity Reports Issued	356

Table 21
COMMERCIAL FERTILIZER LAW ENFORCEMENT
 (July 1964 - June 1966)

Number of Inspections	76,368
Fertilizer Stop-Saled (pounds)	3,036,000
Fertilizer Destroyed (pounds)	50,000
Irregularity Reports Issued	499
Number Fertilizer Samples	16,078

Table 22
BRANDS OF MIXED FERTILIZERS AND FERTILIZER
MATERIALS REGISTERED WITH FLORIDA
DEPARTMENT OF AGRICULTURE
 (As of June 30, 1966)

Number Registered	56,000
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Table 23
FERTILIZER DEALERS, IMPORTERS AND MANUFACTURERS
REGISTERED WITH FLORIDA DEPARTMENT
OF AGRICULTURE
 (As of June 30, 1966)

Number Registered	480
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Table 24**COMMERCIAL FEED LAW ENFORCEMENT**

Number of Inspections	132,881
Stock Feed Stop-Saled (pounds)	1,950,000
Stock Feed Weighed (packages)	66,240
Stock Feed Stop-Saled (short weight)	6,470
Pet Food Stop-Saled (pounds)	20,308
Pet Food Stop-Saled (cans)	60,940
Pet Food Destroyed (pounds)	301
Pet Food Destroyed (cans)	156
Irregularity Reports Issued	668

Table 25**ANNUAL MASTER COMMERCIAL FEED
REGISTRATIONS**

(As of June 30, 1966)

Number of Registrations Issued	557
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Table 26**SEED LAW ENFORCEMENT**

Number of Dealer Inspections	38,973
Number of Consumer Inspections	4,278
Samples Drawn	9,840
Seeds Stop-Saled (pounds)	772,374
Seeds Destroyed (pounds)	52,644
Packages Weighed	15,009

Table 27

**FLORIDA CERTIFICATION SEED LAW
CERTIFIED SEED, CROP OF 1965**

Kind	Acres*	Pounds of Seed Tagged and Sealed
Cowpeas	20	None
Hybrid Corn	300	186,424
Oats	312	341,805
Okra	15	None
Peanuts	10,915	8,668,550
Persian Clover	2	None
Soybeans	527	150,840
Tobacco	1/2	50
Watermelons	617	42,791
Wheat	270	471,060

* Small acreage failed to meet certification.

Table 28

PESTICIDE LAW ENFORCEMENT

Number of Inspections	151,280
Pesticide Stop-Saled (pounds)	451,130
Pesticide Stop-Saled (gallons)	21,176
Pesticide Stop-Saled (containers less than 1 lb.)	23,802
Pesticide Destroyed (pounds)	3,052
Pesticide Destroyed (gallons)	5,846
Irregularity Reports Issued	3,044
Number of Samples Drawn	9,832

Table 29

**PESTICIDE DEALERS, IMPORTERS AND MANU-
FACTURERS REGISTERED WITH FLORIDA
DEPARTMENT OF AGRICULTURE
(1965 Calendar Year)**

Number Registered	1,208
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Table 30

**BRANDS OF PESTICIDES REGISTERED WITH
FLORIDA DEPARTMENT OF AGRICULTURE
(1965 Calendar Year)**

Number Registered 10,394

Table 31

ROAD GUARD SERVICE INSPECTIONS

LIVESTOCK

Number of Bovine, Imports (head)	256,064
Number of Bovine, Exports (head)	439,528
Number of Bovine, Intrastate (head)	78,400
Number of Swine, Imports (head)	332,980
Number of Swine, Exports (head)	51,249
Number of Swine, Intrastate (head)	103,562
Number of Horses, Imports (head)	36,622
Number of Horses, Exports (head)	28,331
Number of Horses, Intrastate (head)	4,169
Number of Goats, Imports (head)	161
Number of Goats, Exports (head)	None
Number of Goats, Intrastate (head)	None
Number of Sheep, Imports (head)	None
Number of Sheep, Exports (head)	1,490
Number of Sheep, Intrastate (head)	None
Number of Livestock Violations	627

DAIRY PRODUCTS

Dairy Products (pounds)	296,243,909
Dairy Products (cases)	343,428

CITRUS

Oranges (boxes)	16,969,844
Grapefruit (boxes)	18,445,447
Tangerines (boxes)	3,407,434
Limes (boxes)	693,643

CITRUS PRODUCTS

Canned Fruit and Juices (gallons)	33,479,787
Concentrates (gallons)	36,930,899
Citrus Juices (cases*)	6,014,067

Table 31
ROAD GUARD SERVICE INSPECTIONS
(Continued)

CITRUS VIOLATIONS	
Number of Violations	177
LIME AND AVOCADO VIOLATIONS	
Number of Violations	121
POULTRY AND POULTRY PRODUCTS	
Poultry (pounds)	543,037,590
Pullets, Imports (head)	1,310,790
Eggs (cases**)	1,897,668
Frozen Eggs (cans***)	1,344,658
VEGETABLES	
Vegetables (cartons)	127,750,060
WATERMELONS	
Watermelons (Cwt.)	12,006,791
Watermelons (cartons)	1,264
GLADIOLUS	
Gladiolus (hamper†)	1,065,131
Gladiolus (dozens)	49,202
CHRYSANTHEMUMS	
Chrysanthemums, Cut (cartons††)	921,269
Chrysanthemums, Cut (individual)	2,187
Chrysanthemums, Cut (dozens)	4,950
Chrysanthemums, Potted Plants (cartons‡)	229,720
Chrysanthemums, Potted Plants (individual)	79,052
COLONIES OF BEES	
Number of Colonies	225,526
VIOLATIONS OF BEE LAW	
Number of Violations	49

* Three gallons per case.

** Thirty dozen eggs per case.

*** Thirty pounds of eggs per can.

† Twenty bunches per hamper.

†† Twenty-two bunches per carton.

‡ Six 6" pots per carton.

Table 32
COMMODITY REPORT
State Farmers Markets Sales Volume

FRUIT AND VEGETABLE MARKETS	NUMBER UNITS*	GROSS SALES
Bonifay	315,171	\$ 251,392.99
Brooker	171,848	306,897.98
Florida City	1,938,085	9,116,030.00
Fort Myers	2,068,374	9,356,331.24
Fort Myers (Team Track)	314,634	355,153.21
Fort Pierce-Florida Products	2,926,058	10,565,454.69
Fort Pierce-Out-of-State Products		
Gadsden Co. (Quincy)	83,925	254,688.22
Immokalee	2,134,947	10,860,933.03
Jay (Peanuts Only)	370	86,028.25
Pahokee	3,864,533	10,920,033.30
Palatka	919,140	5,802,653.95
Plant City	1,213,115	3,428,303.22
Plant City (Processed Commodities)	50,804	363,778.82
Pompano	9,865,877	38,138,749.60
Sanford-Florida Products	4,694,161	12,410,446.10
Sanford-Out-of-State Products	156,429	641,916.45
Starke	297,065	904,713.88
Suwannee Valley (Trenton)	107,772	192,019.20
Wauchula	1,011,196	2,271,068.71
TOTAL	32,133,504	\$116,226,592.84

* Generally a Unit is a bushel.

Table 33
COMMODITY REPORT
State Farmers Markets Sales Volume

LIVESTOCK MARKETS	NUMBER UNITS*	GROSS SALES
Arcadia	309,716	\$5,332,107.10
Bonifay	30,345	580,553.69
Jay	108,136	2,029,482.92
TOTAL	448,197	\$7,942,143.71

* Number of head.

Table 34
LIVESTOCK AND CROPS PAVILIONS
SALES AND SERVICES RENDERED

Number of Cattle Shown	5,390
Number of Swine Shown	761
Number of Horses Shown	1,500
Number of Poultry Shown	524
Number of Cattle Sold	2,171
Number of Swine Sold	619
Number of Horses Sold	313
Number of Poultry Sold	None
Gross Sales	\$1,579,723.93
Meetings and Shows	928
Total Attendance	232,209

Table 35
DIVISION OF MARKETING
BOND AND LICENSE DATA

Number of Licenses Issued to Dealers	4,546
Revenue From License Fees	\$77,770
Total Amount of Surety Bonds Posted	\$25,300,114
Claims Received	205
Investigations of Claims	890
Monetary Value of Claims	\$578,488
Monetary Value of Claims Settled	\$215,847

Table 36
DIVISION OF MARKETING
MARKET PROMOTION DATA

Number of Commodity promotion programs coordinated and conducted	25
Pieces of point-of-sale material developed and used	4,113,490
Number of point-of-sale promotion kits prepared and distributed	462,963
Number of States covered by promotions	46
Number of in-store promotions*	357,472
Number of supermarkets participating in above in-store promotions*	56,467
Number of personal contacts setting up promotions	2,297
Number of marketing and food publicity releases written	231
Number of mailings of releases	22,515
Number of marketing and food publicity pictures created and distributed	18,141
Number of convention exhibits	27

* There are several promotions per store each year; therefore the total number of promotions is larger than the total number of stores participating.

Table 37
VEHICLE, AXLE-LOAD SCALES AND
WHEEL-LOAD WEIGHERS TESTED

Number of Scales Tested	2,679
Number Complying With Law	1,927
Number of Correction Notices Issued	609
Number Condemned	62

Table 38
LIVESTOCK AND SINGLE ANIMAL
SCALES TESTED

Number of Scales Tested	1,317
Number Complying With Law	1,027
Number of Correction Notices Issued	195
Number Condemned	95

Table 39
ALL OTHER SCALES TESTED

Number of Scales Tested	124,828
Number Complying With Law	114,267
Number of Correction Notices Issued	8,866
Number Condemned	1,695

Table 40
FABRIC MEASURING DEVICES AND LINEAR
MEASURES TESTED

Number of Fabric Measuring Devices Tested	2,241
Complied With Law	2,137
Correction Notices Issued	89
Condemned	15
Number of Linear Measures Tested	7,546
Complied With Law	7,109
Correction Notices Issued	242
Condemned	195

Table 41

PRESCRIPTION SCALES TESTED

Number of Scales Tested	3,564
Number Complying With Law	3,104
Number Corrected to Comply With Law	407
Number Condemned	53

Table 42

WEIGHTS FOR PRESCRIPTION SCALES TESTED

Number of Weights Tested	102,582
Number Found in Tolerance	101,917
Number Corrected within Accepted Tolerance	206
Number Condemned and Seized	405

Table 43

GASOLINE INSPECTION LAW ENFORCEMENT

Inspections of Gasoline Pumps at Filling Stations	300,152
Gasoline Pumps Found Inaccurate or Otherwise Out of Order	20,271
Inspections of Kerosene Pumps at Filling Stations	55,972
Kerosene Pumps Found Inaccurate or Otherwise Out of Order	3,272
Inspections of Diesel and Other Pumps	12,173
Diesel Pumps Found Inaccurate or Otherwise Out of Order	395
Correction Notices Issued on Gasoline, Kerosene, Diesel and Other Pumps at Filling Stations and Food Stores	12,908
Vehicle Tank Compartments Calibrated	9,298
Vehicle Tank Compartments Found Not Within Tolerance and Corrected	764
Vehicle Tank Compartments Not Calibrated and Correction Notices Issued	14
Wholesale Meters Calibrated	8,369
Wholesale Meters Found Not Within Tolerance and Corrected	2,140
Wholesale Meters Not Calibrated and Correction Notice Issued	20
Gasoline Samples Drawn from Retailers	100,363
Gasoline Samples Drawn from Bulk Plants, Tank Cars and Terminals	13,270
Kerosene Samples Drawn from Retailers	18,065
Kerosene Samples Drawn from Bulk Plants, Tank Cars and Terminals	3,576
Kerosene Samples Drawn at Food Stores	4,111
Gallons Gasoline Found Illegal and Controlled	4,055,755
Gallons Kerosene Found Illegal and Controlled	391,731

Table 44**GASOLINE AND KEROSENE SAMPLES ANALYZED****GASOLINE ANALYSES**

Samples Found Legal	112,680
Samples Found Illegal	533
Special Samples	746

KEROSENE ANALYSES

Samples Found Legal	24,458
Samples Found Illegal	1,010
Special Samples	40

MISCELLANEOUS (other petroleum products)

Number Samples Analyzed	1,702
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Table 45

**GASOLINE & KEROSENE DEALERS, IMPORTERS
AND MANUFACTURERS REGISTERED WITH
FLORIDA DEPARTMENT OF AGRICULTURE
(As of June 30, 1966)**

Registrants	353
Brands of Gasoline Registered	914
Brands of Kerosene Registered	97

Table 46**BRAKE FLUIDS**

Number of Brands Registered	139
Number of Samples Analyzed	781
Number of Samples Illegal	117
Total Lots Stop-Saled (Misbranded, etc.)	3
Lots Stop-Saled (No Permit)	110